12. I am unable to concur with you in the conclusion you draw from your examination of the evidence produced before the Chief Court, the subsequent correspondence and the general circumstances of the case, and as your decision in the matter is such a serious one for Mr. Robinson, I trust that, in forwarding your Memorandum to the Board, it will be accompanied by this letter, by the proceedings of the Chief Court in the case of the Engine-driver Duncan, and by the correspondence which has taken place between you and the different Departments on the subject. I also trust that the Board, having the whole of the details of the matter before them, will duly weigh and consider them before carrying out or confirming your recommendation for the dismissal of Mr. Robinson from the Company's service. Mr. Robinson has been nearly 14 years in the service, and has had no charge of neglect or incapacity or shortcoming of any kind brought against him until now. The Judge of the Chief Court remarks in his summing up upon the tendency "to be wise after the event" in a case of this kind, and I quite think that the importance and sufficiency of the precautions which were taken are somewhat thrown in the shade by the prominence which is given to certain other precautions which might have been taken.

I return the original documents received.

Note by CAPTAIN L. CONWAY-GORDON, R. E., *Deputy Consulting Engineer, Railway Department, on the Railway accident at the Beas on 28th July* 1871.

In the forenoon of the 27th July, the subsidence of the embankment immediately behind the east abutment of the Beas Bridge rendered this point of the line impassable to traffic.

From Robinson, to Ross.

East defence wall of Beas Bridge gone; embankment will probably be breached during the night. I have stopped the traffic; arrange accordingly. Send down special train of low-sided wagons as many as can be had. Reply sharp. Let me know how many you can send.

From Robinson, to Station Master, Phillour.

Traffic stopped across Beas Bridge; arrange for traffic accordingly.

From Robinson, to Bocquet.

Traffic stopped across Beas Bridge. Send down a special train of low-sided wagons without delay. East defence wall nearly all gone, and embankment will probably be breached during the night.

2. This was reported to the Traffic Manager at Lahore by Mr. Robinson, the District Engineer, at about 2 P. M. (*vide* telegram on margin). The District Engineer also despatched, amongst others, two other telegrams, one to the Station Master at Phillour, and another to Mr. Bocquet, the Locomotive Superintendent (*vide* margin).

3. On receipt of the telegram from the District Engineer, Mr. Ross enquired from him by wire whether the mails and passengers could be transferred across the break on trollies, and was answered in the affirmative. Mr. Ross, accompanied by Mr. Saunders, the Assistant Traffic Manager, Mr. McGarry, the Telegraph Superintendent, and Mr. Browning, Assistant to the Chief Engineer, then started for the Beas by special train, and arrived there about 6-30 P. M.

From Ross, to Robinson.

Can mails and passengers be transferred by trollies, or should we not allow the 9-30 passenger-train to leave to-night. Reply sharp.

From Robinson, to Ross.

We have three trollies here, and a fourth can be procured from Umritsur. Train can run to middle of bridge; the break will only be about one-quarter of a mile.

4. The Traffic officials and Mr. Browning proceeded direct to the break, where they found Mr. Robinson and Mr. Dallas, from whom Mr. Ross ascertained that two signalmen had been properly posted out on each side to protect approaching trains. This enquiry, though some doubt was thrown upon the fact during the trial in the Chief Court, is distinctly admitted in Mr. Robinson's letter of the 28th August.

5. Mr. Ross stopped this side of the break, but finding Mr. McGarry, the Telegraph Superintendent, was going over to the other side to look after the telegraph wires, he asked Mr. McGarry to see if signalmen really were posted on the down-side. It does not appear that Mr. McGarry himself went further than the break, but standing on the line at this point, he saw one man about 500 yards down showing a red flag, it being then daylight. The other signalman he found at the bridge itself.

6. The whole party then left the bridge. On returning to the station, Mr. Ross despatched various telegrams, stopping the transit of passengers beyond the Beas Station on the one side, and Kirtarpoor on the other, and ordering four signalmen down from Lahore by the 9-30 P. M. train.

7. About 9 P. M., Mr. Robinson and Mr. Dallas went again to the break, and finding the embankment washed away nearly to the second telegraph post, Mr. Robinson came back to the station at about 11 P. M. to warn Mr. McGarry that his telegraph wires were again in danger. Mr. McGarry went back with Mr. Robinson, secured the wires, and on leaving about 0-45 A. M. was accosted by the signalman at the break, who asked what he was to do. Mr. McGarry ordered him to go out about 300 yards and to show a red light, and the man apparently moved off. McGarry and Dallas then came away, leaving Mr. Robinson there. Dallas, however, re-joined Mr. Robinson shortly after.

8. On the arrival of the down-train from Lahore at 1-3 A. M., some shunting had to be done. When complete, Messrs. Ross and Saunders went on in the train to the bridge, taking

the four Traffic Signallers with them. They found Mr. Robinson and Mr. Dallas on a trolly about five spans from the east abutment, and the former accompanied them on to the break.

9. In the meantime, No. 6 up-train had been despatched from Kirtarpoor with the mails at about 2-30 A. M. Before leaving, the Engine-driver, Duncan, who started under a caution line-clear report, received special instructions to proceed with great care, and stop well short of the break.

10. Mr. Ross and his party had hardly got to the break when they saw this train approaching. Red lights were at once shown, but too late. The train, consisting of engine with the tender running first, fuel truck, one 3rd class carriage, one reserve carriage, and a brake-van, ran into the hole at the rate of about 12 miles an hour. Fortunately no lives were lost, the only person injured was the Engine-driver, who had a rib broken, but as none of the rolling-stock is expected to be recovered, it may be estimated that the Company has sustained a loss of over Rs. 50,000.

11. It now only remains to consider whether all proper and ordinary precautions against accident were taken by the Railway officials concerned.

12. The Driver Duncan, on starting from Kirtarpoor, received a caution line-clear, under which he was bound not to exceed a speed of 6 miles an hour; he was running his engine tender first, which is contrary to the Rules and Regulations, except in cases of unavoidable necessity, in which case the speed must not exceed 12 miles an hour; he was aware of the break in the line, and was warned at Kirtarpoor by Mr. Tavenor, the Assistant Traffic Manager, to take extraordinary care in running; he knew that not only he himself, but every person on the engine (though he stated the contrary to Mr. Tavenor) was unacquainted with that part of the line. Under every circumstance which should have rendered him doubly cautious, he started from the station at the ordinary speed of 20 to 25 miles an hour; when his watch should have told him he was near the break, he still kept running at the rate of 10 or 12 miles an hour.

13. Although the gates at the level-crossing were open to the rail, and the gate lamp thus showed white up and down the line, the Driver, with an ordinary look-out, must have seen the red light facing him as he passed, and thus have become aware of his proximity to the bridge.

14. Knowing the road fairly myself, with a night such as described by the witnesses, the sheen on the water in the river would have been visible from the raised embankment half a mile, or a mile off, and the towers at the end of the bridge would have been seen looming out against the clear sky from a long distance.

15. It is much to be feared that less even than ordinary caution was exercised by the Driver on the occasion, probably owing to the engine having been run tender first, for in such circumstances it being exceedingly inconvenient to maintain a good look-out from the Driver's place, the temptation becomes strong to delegate the duty to a Native fireman seated in the fore-part of the tender. In fact, Mr. Saunders, in his Report of the 21st August, expressly states that this was done.

16. Signals or no signals on the spot to warn the train exactly when to stop, had the extra caution been exercised by the Driver Duncan, which, under the circumstances, might fairly have been expected from him, the accident would not have occurred.

17. Though acquitted by the Jury (who naturally would rather view the issue as to whether Duncan was the principal person to blame, rather than whether he was to blame at all), there can be no doubt that Duncan committed a gross breach of the Company's Rules and Regulations, for which he should be punished departmentally.

18. For the due protection by lamp or flag of any dangerous portion of the line outside the distant signal-posts, the Engineering Department is responsible. No Railway official will, I think, dispute this. Clause 33 of Section XVIII of the Rules and Regulations common to all the guaranteed lines, is sufficient to establish the point without reference to Circular No. 115 of 1870, which, on this Railway, was issued by the Chief Engineer and Traffic Manager in concert to prevent any possible misunderstanding on the subject. This Circular concludes as follows:—

"*In the event of any accident or obstruction occurring on the line* * * * * * *the Engineering Department will at once take steps to erect and provide the necessary signals, and the Traffic Department will, with as little delay as possible, send to the spot competent signalmen or pointsmen to work the same, also a European to control, if necessary.*"

That is, while recognising the exclusive responsibility of the Engineering Department for the due provision of signals, it assumed that part of the Traffic establishments on either side of the break would be thrown out of work exactly at the time all the Engineering hands were most pressed, and that, therefore, the working of the signals after their erection by the Engineering Department, might be economically performed by the Traffic Department.

19. Reviewing the conduct of Mr. Robinson, the District Engineer, on this occasion as the Officer responsible for the due protection of this dangerous portion of the line, it appears that he confined his exertions in this direction to telling his Assistant, Mr. Dallas, to send two men out with signals. Mr. Dallas again deputed the duty to the Platelayer, Mr. Powell.

20. It does not appear from the evidence that any European went with the Native signalmen to show them exactly where to stand, or that even it was thoroughly explained to them what they were to do. They were simply told to go out so many bullies (*i. e.*, telegraph posts) and show danger-signals. One man, Ram Pershad, never seems to have got far from the break. He was found there by Mr. McGarry at midnight, wholly ignorant of his duties; what became of him afterwards nobody knows. The other went out taking his charpoy and his hookah with him, and as he says himself, "*I was never directed to perform a similar duty before.*" The men were posted at midday; at 3 A. M. the following morning they were not relieved. Their lamps were lit at dusk, but it does not appear that they had even a supply of oil. No European went near them from midnight to the time of the accident.

21. Under these circumstances, it would not be a matter of surprise that, on the arrival of the train, no lights were visible. The evidence of Shannon, the Guard, Oram, the Telegraph Inspector, Burrows, the Fireman, and Illai Khan, the Native Stoker, agree on this point, no lights were visible till close on the break when "*they turned up all of a sudden*" and were evidently the lights carried by Mr. Ross' party. The evidence, on the other hand, alluded to by Mr. Harrison in paragraph 11 of his letter of the 20th, was gone into carefully by the Assistant Inspector General of Railway Police, and found so utterly unreliable, that he was unable to produce it in Court to strengthen his own case.

22. I think it must be considered as nearly certain that one Chowkeedar remained at the break wholly ignorant of his duties, and that the other, placing his lamp on the rails where it gradually burnt low, went to sleep, and that no proper lights were shown to the advancing train.

23. The simplest and most obvious precautions would appear to have been omitted by the District Engineer. No temporary signal-post was erected, although there was ample time during the afternoon of the 27th; no intimation of the danger was sent to the gate-keeper at the level-crossing with instructions to keep his gate closed against the railway, and suffer no train to pass; a red light placed on each of the towers of the bridge would have been visible along the line for miles.

24. Even when the train was expected, though Mr. Robinson was actually on the bridge, he appears neither to have taken the trouble of going across the gap himself, nor to have sent his Assistant, Mr. Dallas, to see if the signalmen were at the post; and this in a case where his own estimate of the intimate aquaintance with their duty of the Natives he had sent out, as given in evidence, was as follows:—"*One man seemed to understand his duty, the other I am rather doubtful about.*"

25. The plea advanced by Mr. Harrison in Mr. Robinson's favor in his paragraph 6, *viz.*, that the Traffic Manager should not have brought the train on to the closed section without satisfying himself that sufficient precautions had been taken, will hardly assist Mr. Robinson's case much. The same argument is advanced by Mr. Robinson himself in his letter of 28th August, in which he says "*as the traffic had been stopped by the undersigned, he was of opinion no accident could possibly occur.*" Had this been the case, had Mr. Robinson closed the line between the Beas and Kirtarpoor Stations, and the train been brought on to the section without his knowledge, the Traffic Manager would doubtless have been very much to blame.

26. But as a matter of fact, Mr. Robinson's own telegrams to Mr. Bocquet and the Phillour Station Master show that it was the bridge, and not the section, he considered closed; not only does his telegram to Mr. Ross say distinctly that the break would not be quarter mile long, in other words, that he expected the trains to run up to either end of the bridge and shift the mails, but this course had actually been pursued in the case of the last down-train; he himself ordered out ballast trains to run over the section; he himself knew this particular train was expected.

27. Reviewing the whole of Mr. Robinson's conduct on the occasion, I can come to no other conclusion than that it was characterised by a careless disregard of duty which was eminently calculated to produce the accident which ultimately occurred.

28. I am sorry I cannot agree with the Agent in acquitting Mr. Ross, the Traffic Manager, entirely of blame. Impressed equally with the Agent with the evils of divided responsibility, I agree with him in considering that Mr. Ross was correct in restricting his intervention to satisfying himself that the District Engineer had generally taken the usual precautions. But when he knew that a train was expected with the mails, which there would be some difficulty in getting over the break, I consider that he should either have gone himself, or deputed one of his Assistants to have been on the spot, waiting to receive and stop the train in the most convenient spot, to have made every arrangement to facilitate the passage of the mails, and to see to matters in general. Had this been done, the Officer so deputed could not have failed to detect the insufficiency of the signal shown.

29. Generally as regards the whole of the officials present, after a perusal of Clauses 6 and 8 of Section II of the Rules and Regulations, it is perhaps a matter for astonishment as much as anything else, that not one of them ever considered it worth while to go across the break and look personally to the signals before the arrival of the train.

30. The same want of energy appears to have characterised the action on the part of the Engineering Department after as well as before the accident. The engine and carriages fell in at 3 A. M. At 7 A. M., Mr. Harrison arrived at the spot with an engine; at that time the engine upside down was still partly above water, and did not wholly disappear for hours afterwards. The carriages were above water, the brake-van had two of its wheels actually still on the rails above.

31. Even if impracticable to prevent the carriages sinking further, many of the working parts of the engine might have been removed previous to Mr. Harrison's arrival. After an engine was on the spot to supply any required amount of haulage power, it is to me a matter of surprise why the brake-van was not pulled back on to the line, a rough pair of shears constructed, and nearly every thing hauled piece-meal out of the hole during this and the succeeding day.

32. In conclusion, I observe that such a concatenation of cases of either forgetfulness or neglect of the Company's Rules and Regulations on the part of all concerned as combined to produce this accident, could hardly have been possible on a well-managed line. It is, I believe, due to the laxity of discipline which is the direct result of the affairs of the Company having been administered for the last six years by Agencies wholly without previous Railway experience of any sort; Agencies, too dependent on the reports and opinions of their subordinates to be able to give an authoritative decision that carries weight, and too ignorant of the details of Railway working to be able to effectually control the Executive Heads of Departments in the performance of their duties.

No. 56, dated 29th September, 1871.

From—The Agent, Sindh, Punjab and Delhi Railway,

To—Chairman, Board of Directors, Sindh, Punjab and Delhi Ry., London.

In forwarding my decision on the case of the accident at the Beas, I thought it desirable that the Board should have before it the expressions of opinion of Mr. Harrison, the Chief Engineer. I consequently, in furnishing him with a copy of my decision, invited him to represent any extenuating circumstances that might occur to him in favor of one Officer of his Department. His letter No. 427 of 20th instant is attached to my decision, together with the notes of the Judge in summing up the case, and Mr. Robinson's and Mr. Ross' explanations.

Mr. Harrison's defence of Mr. Robinson in no manner changes the opinion I have arrived at, formed upon the evidence taken before the Court, and explanations given by both Officers. I cannot agree with Mr. Harrison in thinking that Mr. Robinson took the most ordinary precautions, and I think it unreasonable to endeavor to shift any of the blame on the Traffic Department. It is quite clear that Mr. Robinson neglected the two most obvious and most necessary precautions, *viz.*, the erection of a fixed signal, and the closing of the gate; if either of which had been done, the accident could not probably have happened, and both should have been done; this duty belonged solely and expressly to the Engineering Department, and Mr. Ross cannot possibly be accused of sharing in the neglect; indeed, it is shown that the Traffic Department had not been informed that the gate was left open, and this neglect led to that Department warning the Driver to expect it to be closed against him. Mr. Harrison remarks upon the insufficient evidence taken as to lights being burning. In forming my decision, Mr. Saunders' expressions on the subject did not escape my notice, but it appeared to me that the two facts above-noted being proved, that no amount of evidence would have convinced the Court, as it certainly would not have convinced me, that the signals were so effectually disposed as to have been seen by the Driver and the persons in the train whose lives depended upon seeing them.

Mr. Harrison endeavors to show that the Chowkeedars sent out were not inexperienced; this may be, but it is quite evident that no Officer was sent to post them, and Mr. McGarry found one of them who had not understood the instructions given him and not knowing where to go to.

The explanation given why no relief was provided for these men is not to my mind satisfactory.

Mr. Ross had certainly sent to Lahore for signalmen who could not arrive till 1 o'clock in the morning, so that the Chowkeedar signalmen were expected to keep watch without relief for more hours than nature could well bear. Supposing they could have been posted the moment they arrived, they would have had to keep watch 7 hours. I cannot but think it neglect in not providing a relief, as it was in not sending some European to post them.

In none of these neglects can Mr. Ross be charged with sharing, and until the signalmen were duly relieved, the responsibility of maintaining efficient signals rested entirely with the Engineering Department.

The rules quoted by Mr. Harrison in support of divided responsibility do not apply to the circumstances of this case. Mr. Ross was certainly on the spot. Circular No. 115 had clearly defined the line of duty between the two Departments. Mr. Robinson, an Officer of 14 years' service, had informed him that his part of the duty had been performed, and Mr. Ross was preparing to perform his part. He cannot possibly be held responsible for neglect to erect a signal or to close the gate which was supposed by the Traffic Department to be closed.

In a case of this sort it is necessary to look to primary causes, and not to allow the case to be entangled with extraneous matter, and the question is reduced to this, *viz.*, had a fixed signal been erected; had efficient signalmen been provided with proper relief, the accident could not have occurred. Again, had the gate been closed, there would have been a double security, or had the Traffic Department been informed that it was kept open, the instructions to the Driver to find it closed against him, and which evidently misled him, would not have been given. All these omissions rest solely on the responsibility of the Engineering Department, and the Traffic Manager cannot possibly be held in any way responsible for the neglect.

Such is my conviction, but the Chief Engineer's opinion, to which it is opposed, is worthy of the careful consideration of the Board in forming its decision in such a serious case, and I am glad that the Board should have before them every thing that can be said on either side where the reputation of two Officers of standing is at stake.

Mr. Harrison's concluding paragraph is certainly entitled to careful consideration. In being wise after the event, have we allowed the precautions which might have been taken to cast in the shade those that were taken.

Mr. Harrison and I differ in opinion. I have shown that, in my opinion, not even ordinary precautions were taken. Mr. Harrison thinks they were. The action taken is clearly described, and it will rest with the Board to determine which opinion to adopt. I shall be only too glad to think myself mistaken if the Board think differently from me.

No. 3681 G, dated 31st October, 1871.

From—Consulting Engineer for Railways in Punjab,
To—Agent, Sindh, Punjab and Delhi Railway Co.

In forwarding a copy of a letter No. , dated , to the Secretary to the Government of India, in the Public Works Department, from which you will observe that His Honor the Lieutenant Governor fully concurs with you as to the degree of culpability that attaches itself to Mr. Robinson, the District Engineer, from his conduct on the occasion of the late Railway accident at the Beas Bridge, I am directed to enquire why the Agent, holding such views, did not at once take steps to terminate Mr. Robinson's agreement with the Company.

2. If the Agent has not the power of terminating the engagement of any of the Company's employés under covenant, His Honor thinks this should be represented to Government with a view to such power being placed in the Agent's hands.

No. 3347, dated 6th September, 1871.

Memorandum by MAJOR GENERAL S. A. ABBOTT, *Agent, S., P. and D. Railway Co., on the accident on the Beas River on the 28th July* 1871.

Before reviewing the case and passing orders upon it, I had hoped to have been in possession of a copy of the proceedings of the Chief Court, for which application has been made, but which, in consequence of the closing of the Court immediately after the trial, has not yet been obtained.

2. I have been given to understand that the Judge commented on the neglect of others than the Engineering Department, but if the published report of the evidence taken at the trial of Driver Duncan, which appeared in the *Indian Public Opinion*, can be depended upon, which I believe it may, no doubt for a moment can be felt that the entire blame rests with the District Engineer, Mr. Robinson.

3. With my No. 2974 of 3rd August, I forwarded, for the information of Government, copy of a Report, dated the 28th July, from the Traffic Manager, by which it appeared that the blame rested with the Driver, but that there should be no doubt on the subject, I directed a Police enquiry to be made.

4. The case was got up by the Assistant Inspector General of Police, and Driver Duncan was tried and acquitted.

5. I deemed it desirable to call on the Traffic and Engineering Departments, respectively, for any explanation they might have to offer; these reached me only yesterday, and copies are annexed.

Mr. Ross, Traffic Manager, No. 1071, dated 21st August 1871.
Mr Robinson, District Engineer, No. 2, dated 28th August 1871.

6. The history of the accident I will endeavor as briefly as possible to narrate, basing it upon the published evidence and on the reports mentioned in the preceding paragraph, making use also of the Police report.

7. On the 27th July, shortly before 10 A. M., a report reached Mr. Robinson, District Engineer, of the subsidence of the earth behind the retaining-wall of the east abutment. He cautioned the up-mail due at 11-56 A. M., which proceeded slowly over the bridge. The injuries extending, the down-mail due at 1-25 P. M. was prevented crossing the bridge, and he telegraphed to Traffic Manager to stop the traffic.

8. The Traffic Manager arrived at 6 P. M. by special train from Lahore, and was informed by Mr. Robinson that men had been sent out at dusk towards Kurtarpoor with danger-signals: one to remain between the level-crossing gate at 29th mile and the bridge, the other to remain a short distance from the break. About 11 P. M. the earth was scoured away from under the rails, and Mr. Robinson informed Mr. Ross of the fact. At about ½ to 3 A. M. of the 28th, all proceeded to the break, and had scarcely arrived when they saw a train approaching; danger-signals were shown by the party at the break when the train was within 150 or 200 yards, but these the driver appears not to have seen in time to stop the train, which ran tender foremost into the gap (which did not then extend quite through the embankment); two carriages followed the engine, while the brake-van remained for some time suspended on the edge of the gap, but eventually followed the other vehicles. Neither engine nor carriages are ever likely to be recovered, and the loss the Company has sustained in these vehicles amounts to Rs. 52,850-2-3.

Vide Mr. Robinson's letter No. 2, dated 28th August.

9. Most providentially no lives were lost; this is attributable to the precautions taken by the Traffic Manager, who directed all passengers to be left at Kurtarpoor, and the mails only to be sent on by engine with caution.

10. Mr. Robinson, in his evidence before the Court, endeavours to throw the blame of defective signals on the Traffic Manager, representing that that Officer had power to interfere if he thought his arrangements insufficient. This evidence was calculated to mislead the Judge and Jury in forming a judgment in the case, and, Mr. Robinson should have known, was quite contrary to the rules of the service. The Traffic Manager on the occasion of a break on the line has no authority whatever over the Engineering Department; on the contrary, the responsibility of exhibiting danger-signals rests entirely with the Engineering Department, and I will show how Mr. Robinson failed in his duty.

11. In all Railways a defective or broken line is well known to be under the Engineering Department, and the Traffic Department can only exercise authority upon an open-line. But independently of this recognized fact, Section XVIII of Standing Regulations for Inspectors, Foremen, &c., clearly lays down rules for the guidance of Engineers under such circumstances. Clause 2 provides for the Inspector being supplied with signal-lamps. Clause 8, that the Inspectors obey all the orders of the Engineer. Clause 13, that he be provided with detonating signals. Clause 18, that in event of repairs going on, men must be stationed half a mile both up and down the line from point of interruption, and must show a red or green signal as the case may require; they must keep a sharp look-out, and must remain at their posts until the line is again clear and safe. Clause 33 provides that, in event of flood, the Foreman shall examine carefully culverts and bridges, and should he apprehend danger, exhibit proper signals to stop trains, if necessary, until the Inspector arrives. Section V, again, provides for the employment of detonating signals in addition to the regular day and night signals in case of *fog*, obstructions, or obstacles.

Lastly, Circular 115 of 1870, signed both by the Officiating Chief Engineer and Traffic Manager, provides in case of accident or break in the line, that the Engineering Department will at once take steps to erect and provide the necessary signals, and the Traffic Department will, with as little delay as possible, send to the spot competent signalmen or pointsmen to work the same, also a European to control, if necessary.

12. From the foregoing rules there can be no mistake as to the responsibility of the Engineering Department in providing signals and signalmen, until the Traffic Department relieves them in due course.

Turning to the evidence we shall see how this duty was performed.

The District Engineer despatched two Chowkeedars, men employed merely for the protection of the bridge, to prevent persons or cattle from trespassing, and only quite recently entertained. These two men, ignorant of the duty required of them, were sent out at 7 P. M. with no Officers to post them, and told to show danger-signals, and were expected to keep a vigilant look-out with lamps trimmed and burning till morning. No relief was provided, nor does it appear that a supply of oil was given with the lamps. However this may be, the action taken was so palpably ineffectual as to be alone sufficient to account for the accident.

13. Here was a dangerous break, not likely to be repaired for some time, no danger-signals were erected, although from shortly after 11-56 A. M. on 27th when the up-train passed, the Engineer found the danger so great as to induce him to stop the 1-45 down-train from crossing the bridge.

There was ample time to have erected danger-signals and to have provided an efficient establishment of signalmen from platelayers' gangs, who were acquainted with signalling duty.

Further than this, the level-crossing at the Trunk Road, about one mile from the river, was under charge of the Engineering Department. The gates at this crossing had until quite recently (10 days only before the occurrence) closed across the Railway, but from frequent accidents happening, it had been determined to shut them to the Trunk Road at night, and open to the Railway. Intimation of this change had not been communicated to the Traffic Department by the Engineer, and the consequence was that at Kurtarpoor instructions were given to the driver to expect the gate to be shut against him. This circumstance alone was sufficient to have misled the driver.

Vide evidence of Shannon, the Guard.

14. The District Engineer here failed in his duty: *first*, in not acquainting the Traffic Department of the change that had been made; *secondly*, in not availing himself of this gate to close it to the Railway as the most effectual signal he could have given to bring-to the train, and caution it of the danger so immediately a-head.

15. In regard to the non-application of detonating signals, the use of them is required when there may be "*fog, obstructions, or obstacles,*" by which is generally understood obstructions to vision. In this instance it was a clear night, there were no carves or other obstruction to vision, and had the ordinary signals been applied, there would not have been occasion for them. No doubt the application of them might have occurred to the Engineer, seeing that no fixed signals had been erected and the signallers employed were ignorant of the duty required of them.

16. Thus, up to the time of this unfortunate accident, it is clearly seen that the entire responsibility rested with the District Engineer, and not with the Traffic Manager; and under the circumstances of extraordinary neglect in observing the most ordinary precautions, it is not surprising that the Jury returned a verdict of acquittal on driver Duncan, the justice of which cannot for a moment be doubted.

17. Whether the tender being foremost was neglect of the driver, or a necessity under peculiar circumstances, it should not have prevented the driver from the engine seeing the red lights ahead *had they existed.*

That the driver was new to the line is not a circumstance that could have affected the question, except in making him more cautious, for drivers are guided by signals, not locality.

18. Although, according to Departmental rules, the driver may not be considered to have acted with due precaution in running at the rate of 10 and 12 miles an hour, it is quite clear that he has been most justly acquitted on the grounds of the very inadequate measures taken by those who were responsible for establishing proper signals for his guidance, and regarding which there could be no doubt or mistake.

This neglect has been shown to have rested entirely with the District Engineer, Mr. Robinson, and it is a painful duty I owe to the Company to bring his conduct under the consideration of the Board, with view to very serious notice being taken of it.

19. At a time when we have dispensed with the services of so many Engineers without fault, I cannot but in justice recommend that the services of Mr. Robinson be dispensed with, and some Engineer whose engagement has been terminated be appointed, or other arrangement made to supply the vacancy.

20. *I entirely acquit Mr. Ross*, the Traffic Manager, of neglect throughout this unfortunate occurence. His own evidence as quoted before the Court was calculated to give the Judge an erroneous impression of his responsibilities. He is reported to have said "on such occasions I exercise a general control," but he probably misunderstood the question, for it is quite clear and evident that he has no control whatever over the Engineering Department. It is well understood that on an open-line the control belongs to the Traffic Manager, and Engineers are bound to attend to his requisitions, but with a closed line the entire control rests with the Engineers, and the Traffic Manager attends to their requisitions. Mr. Ross even went beyond his duty in sending his Telegraph Superintendent to see that the signals the Engineer had sent out were burning, which they were reported to be about 12 midnight; on such occasions there is, and must be, undivided responsibility. The rules are clear and distinct, and it cannot be permitted that one Department shift its responsibility to another, or the utmost confusion would prevail.

No. 2589R, dated the 18th December 1871.

From—COLONEL C. H. DICKENS, R.A., Secretary to the Govt. of India, P. W. DEPT.,

To—The Consulting Engineer, to the Govt. of India, for Guaranteed Railways, Lahore.

I am directed to acknowledge the receipt of your letters Nos. 3680G and 3839G, dated the 31st October and 6th November 1871, relative to the accident to a train at the gap in the approach to the Beas Bridge on the 28th July 1871.

2. The circumstances of the accident are clearly narrated in Captain Conway Gordon's report, and as this substantially agrees with the statements of the officers concerned with the accident, it is unnecessary to recapitulate them. It has been shown that a train was hauled by an engine, driven tender foremost, at a speed which is not allowed by the regulations, towards a place where there was known to be a break in the railway: that, apparently in the total or partial absence of proper signals, but nevertheless in a clear night, the train was driven into the gap at the rate of about 12 miles an hour: that at this gap the Traffic Manager and the District Engineer had been for hours, but that neither officer had considered it his duty personally to see that proper signals were shown, nor had it been considered necessary to send any responsible person to post the signalmen; and lastly, that when the accident had occurred, no real attempts were made to save any portion of the rolling-stock which had been precipitated into the break, and which was consequently totally lost.

3. I am desired to state that, in the opinion of the Governor General in Council, this accident reflects the greatest discredit on every person concerned in it, and that it presents a picture of lax discipline, mismanagement, and carelessness of life and property, of which it is necessary that the most serious notice should be taken.

4. The engine-driver was acquitted when tried in a Criminal Court, but it is shown that, though warned to drive slowly, and cautioned as to the danger that existed, and though he was ignorant of this portion of the railway, and was, therefore, required to be doubly vigilant, he nevertheless drove at an excessive speed, and it seems impossible from the account of the accident that he can have kept a proper look-out. The lives of railway passengers depend upon the proper fulfilment of their duties by the engine-drivers, and considering the want of caution, and disobedience of orders displayed by the driver of the train in question, the Governor General in Council considers that he should be dismissed from the Company's service, and that other Railway Companies should be warned against entertaining him as a driver.

5. The District Engineer, Mr. Robinson, did to some extent attempt to do his duty by sending out danger-signals from the break. But he neither personally, nor by means of his Assistant, saw that the men took up proper positions, nor did he take steps for their relief, or for a supply of oil for their lamps, and no immediate measures for the erection of danger-signals were initiated.

6. In summing up the case, the Agent came to the conclusion that Mr. Robinson should be dismissed from the Company's service, but instead of acting in accordance with his judgment, as he had the power to do, he invited the Chief Engineer to represent any extenuating circumstances that might occur to him. Mr. Harrison in reply endeavoured to show that other persons were to blame for the accident, including the driver and the Traffic Manager, but as the Agent subsequently pointed out, he failed to show that the District Engineer took the most ordinary precautions for the safety of the traffic. The Agent, however, considered it right to refer the matter to the Board of Directors for decision with an expression of his own and the Chief Engineer's opinion.

7. The facts adduced sufficiently indicate that the District Engineer is totally unfitted to be entrusted with the charge of works on an open line of rail-

way, and it is presumed General Abbott has suspended him, but that if not, it appears to the Government of India that he should do so pending the receipt of orders from his Board.

8. The Governor General in Council regrets that the Chief Engineer should have endeavoured to support his subordinate, the District Engineer, when that Officer's carelessness had produced such disastrous results, and when he had failed to take active steps to secure the Company's property.

9. The conduct of the Traffic Manager was but little less reprehensible than that of the District Engineer. Although by the rules the Engineering Department is responsible for the erection of signals, it is the duty of the Traffic Department to assume charge of the working of the signals as soon as it can possibly do so. In this case the Traffic Manager of the line was on the spot, but he never crossed over the break to inspect the arrangements made for stopping the expected train, nor did he take any measures for its protection beyond asking Mr. McGarry, the Telegraph Superintendent, to see whether the signalmen were on the alert. His negligence in this matter, combined with the subsequent great delay in making arrangements for the conveyance of passengers over the break, calls for severe censure, and will be brought to the special notice of the Secretary of State.

10. It is with much concern that the Governor General in Council is constrained to make these remarks, but the matter is one of the greatest public importance. On the proper administration and working of railway traffic many lives daily depend, and so far as in him lies, the Governor General in Council is determined to insist upon every precaution being taken for the proper and safe conduct of this traffic. In the opinion of the Government of India, the circumstances of this accident afford an additional proof of the want of discipline, prudence, energy, and care that seem to characterize the management of the Punjab and Delhi Railways, and indicate the imperative necessity for a thorough and vigorous reform.

GOVERNMENT OF INDIA.

DEPARTMENT OF AGRICULTURE, REVENUE, AND COMMERCE.

SANITARY REPORT ON TURKISH ARABIA.

Dated Residency Baghdad, the 2nd October 1871.

From—Surgeon W. H. Colvill, Civil Surgeon, Baghdad, Turkish Arabia.
To—The Political Agent, Turkish Arabia.

My intention in this letter was to attempt a general sanitary report of Turkish Arabia, but I have found the difficulties greater than I imagined; for I have had to search for nearly all the history of the past in the records of the Busreh Factory and this Residency, and there are neither registers, statistics, nor census, from which alone conclusions can be drawn with the accuracy desirable. The result is the collection of fragments I now submit in default of a connected report.

The province of Turkish Arabia is composed entirely of alluvium deposited by the great rivers Tigris and Euphrates and their tributaries in the space between the mountain limestone ranges of Persia on the north and the desert of Arabia on the south. With the exception of some marshes, a few recent canals, and the rivers with a little vegetation fringing their banks, the whole of this space, over eighty thousand square miles, is a bare plain traced with the remains of a network of canals, and mounds, the remains of towns and villages. The soil is saline, in places so much so that six years ago, when the duty on salt was greatly increased, the authorities could not understand the diminished con-

sumption till it was discovered that the Arabs simply washed some earth in the water they baked with, and found that sufficient to flavour their bread. Wells, dug a few feet from the rivers, generally remain brackish for ever. Saltpetre is found abundantly amongst the mounds. In order to give some idea of the temperature and climate generally, I have drawn up this table from observations made with care by Dr. Hyslop, but it by no means shews any extreme; for I have known the thermometer 123° Fh. in the shade in August, and in winter I have seen ice on the road bearing a horse and his rider, and we have rolled snow into balls so large that they have kept us in ices for weeks. The only means I have of judging of the dryness of the atmosphere is by tatties with the thermometer outside, but in the shade, at 110° or 115° behind the tattie, it falls to 73° or 75° :—

General idea of an Average Season in Baghdad.

Months.	Average maximum temperature.	Average minimum temperature.	Number of cloudy days.	Number of days with rain.	Number of days with N. W. winds blowing.	Number of days with S. E. winds blowing.
January ... For a few days in this month the thermometer in the verandah of the courtyard is down to 34°	57	45	13	6	20	6
February	66	52	12	2	14	10
March	74	59	13	5	15	9
April	82	65	8	3	18	10
May	92	74	14	3	20	7
June	99	80	1	...	27	...
July	103	85	...	...	31	...
August ... Few days, middle of month, thermometer 115°; a few days with banks of clouds at sunset.	107	88	...	...	25	5
September	101	83	...	...	20	3
October ... Sometimes a few drops of rain ...	90	71	14	...	14	7
November	71	57	10	2	12	12
December...	64	52	17	8	14	11
Rain-fall 18 to 25 inches. In the year ...	...	...	102	29	230	80

N. B.—The thermometers with which these observations were taken were in the verandah in the courtyard of the house, and so less subject to sudden change.

All the towns in the province are very much alike, and the houses are as like as peas, differing only in size and quality. The very poor ones are of sun-dried clay, the others of kiln-burnt bricks. All are in the shape of a quadrangle formed by four blind walls, which are made of thin skins of brick-work outside and in, and filled between with rubbish. The rooms, raised eight feet from the ground, are built round the inside of these walls, and all open into the courtyard, with the exception of a few of the better class which have projecting

windows to the streets, or, better still, on the river. Underneath the rooms are vaults four to six feet below the surface, in which five months of the intense heat are spent. There are verandahs along the rooms towards the court. In the better-class house, the quadrangle is divided into two, one portion for guests, and the other for a harem. The courtyards are paved with brick, with here and there a hole leading to a bottle-shaped space, into which most things are swept, and all fluids run to be absorbed. Almost every house has its well of brackish water, and the privies are funnels leading to bottle-shaped spaces under ground, from which the refuse, not absorbed by the soil, is taken once a year; these funnels are at an angle, and in my house, where there are three, if they and the well were extended a few feet, they would all meet at a point. It is scarcely then to be wondered that even the native discovers a steam in his court-yard of a hot evening which drives him to the flat roof on which he sleeps. The houses are so closely packed together that one is frequently entered by a passage underneath another, and the four walls are simply partitions from houses all round. Looking down from a minaret, Baghdad resembles a piece of honeycomb, only the walls form quadrangles instead of hexagonal spaces.

Population.

The population of the province is, say, one million, giving about twelve persons to the square mile; but if the towns and villages are excepted, only six for five hundred thousand are pastoral Arabs and Bedowin tribes.

Baghdad.

Baghdad, by far the largest and most important town, contains 70,000 Mahomedans, 2,000 Christians, and 18,000 Jews, in all 90,000 inhabitants.

Mahomedans.

The Mahomedan population of Baghdad, with the exception of Turks, Persians, and Indians,—seven thousand in all,—is of Arab descent, and it is curious to trace the Bedowin from the desert into the city. In the desert we see him herding and associating with his camels,—a mere animal with only a rag round his waist, and a dirty handkerchief fixed on his head with a piece of cotton rope, his wife with simply a blue, cotton shift, and his children with nothing; his tent is a piece of camel-hair cloth, raised on four sticks from the ground, sufficient only to sit under; his food is what the camel produces, with the addition of dates; bread is a luxury; meat he never sees; eggs he cannot have, for he has no fowls. He is generally days from water, and constantly on the move. Something happens—a quarrel—and he wanders away and reaches one of the rivers, and here a new world opens on him. He sees large tents with walls in common use—tents such as his chief only used; he sees men well clad, sitting on carpets, bread in abundance, plenty of meat and eggs, dates little used, and the camp, instead of camels, is surrounded by buffaloes and sheep. If there is a marsh instead of tents, he sees imposing villages of reed huts, some of the huts of great size, supported on pillars of bundles of reeds and lattice work between, and there, for the first time, he sees a cultivator throwing in seed along the margin of the marsh as the water recedes. These are semi-settled Arabs divided into powerful tribes, but looked on by the Bedowin generally as the highland Kerne looked on the lowland farmer. Though in advance of the Bedowin, these have not much to boast of in the way of intellect. But the cleverer amongst them draw closer to the towns and become graziers, traders in brushwood, and farmers. As graziers, they still keep buffaloes, and the women carry the fresh milk to market; as traders, the women and children cut brushwood, while the men drive it in on donkeys for sale; and as farmers, they hold mud houses in villages and serve masters who generally own the land and live in town. The children of these acquire sharpness by contact with the town, and after some generations disappear amongst its citizens.

The citizens of Baghdad, called somewhat contemptuously "Baghdadie," has lost all trace of his connection with the desert, unless occasionally by marriage; if he is down in the world, he counts up only to his grandfather; if by chance he

were a man of note, or if he is wealthy, his friends remember for him how his grandfather sold sheep's feet in the streets, or made kabobs in the bazaar. I know those who are now striving to acquire wealth, and those who are spending in lust and riot what their fathers accumulated, and a few who have fallen from misfortune; but I cannot call to mind a family of Mahomedans with three generations of wealth in the place. The result of this is to form a strong middle class, kept vigorous by the influx of Arabs, with manners and general intelligence more resembling the European than the Asiatic. The boys of this class play hockey, imitate our cricket, and pelt one another with stones; and as men, their manner and address, their general converstaion and the interest they take in the ordinary topics of the day, make one at times forget for the moment that the speakers are not foreigners of the continent of Europe. The middle-class gentleman, it is true, keeps his wife in a measure secluded, but she is restrained by the rules of society, and not by physical force, and the husband does not object to speak of her much in the way an acquaintance at a club might mention his wife to whom you were unknown; only, instead of saying "my wife," or "Mrs. So-and-so," he says "my house," and you know what he means. The Bedowin, unless a Wahabee, when he is so often under fear, belongs to a very broad church, and if he knows one sect of Mahomedanism from another, will probably say he is Suni; but when he settles, he becomes a Sheah and a bigot: he, however, eventually reverts, for the citizen of Baghdad of to-day is a Suni, and anything but a bigot.

Christians.

In the neighbourhood of Mosul, Christians, chiefly Nestorians, cover a considerable extent of country, and either cultivate the ground, or, as weavers, collect into villages. Many come to Baghdad, either to make a little money and return, or to settle permanently.

Round lake Van, and near Hamadan and Isfahan, in Persia, are Armenians with whom the small body here in Baghdad keeps up a connection.

The Christians here are two thousand in number, and divided into six sects. Five of the sects agree to intermarry, the rule being that the wife chooses her own church, but the children must be reared with their father's people. The exclusive, as well as by far the most bigoted, body is the Armenian community, which marries only with its own creed. But thus there is a constant introduction of fresh blood.

Jews.

Tradition has it that the Jews of this province are descended partly from those who remained behind in Babylon when Cyrus gave permission for their return to Jerusalem to rebuild the temple, and who have continued to live in the various capitals which sprung up one after another on the death of Alexander; but they are believed to be chiefly descended from a party of fugitives who escaped destruction at the taking of Jerusalem by Titus, and settled at Anah, on the Euphrates, and, 200 to 250 years ago, came to Baghdad and mingled with their brethren. All are collected in Baghdad, with the exception of some in the larger towns of the province, and a very few dressed as Bedowins live too useful to be molested amongst the tribes, and generally work as goldsmiths for the women. The Jews are chiefly bankers, jewellers, and shop-keepers. Here, then, is a peculiar people shut off from the outer world for generations at least—a people bound to marry in and in, even to the deceased brother's wife, with no district of country, like the Christians or Mahomedans, from which to draw fresh blood—a people who have kept closely bound together for ages, and never wandered away unless one or two in the last generation to India, and on to England, where they became merchant princess—a people whose houses and mode of life, and in fact everything that one can imagine—are the same to-day as they were a hundred years ago. As they are naturally intelligent and very conservative, it is interesting to get their account of any disease to which they have paid particular attention, even though they have no statistics; and they appear to have watched with anxiety the progress of phthisis in their community.

Phthisis. [Pulmonary consumption.]

My informants, Jews, who must have been in their prime some twenty years ago, and are now intelligent men, well read in their own literature, tell me that fifteen to twenty years ago, finding phthisis increasing amongst them in Baghdad, they began to think, and they reasoned thus:—First, said they, when a person is attacked by phthisis, death is only a matter of time; if he happen to be rich, he may lengthen his days a little by means of every comfort, but die he must; secondly, whole families are dying off; thirdly, the disease is increasing, and, fourthly, while recognising fully the hereditary influence, they felt convinced that phthisis is contagious. They then resolved to adopt a system of seclusion, and to that they have strictly adhered ever since. The patient lives in the same house with the family, but he must eat by himself apart, using his own drinking vessel, plate, and spoon, which none of the others will touch. He sleeps by himself. If they touch his clothes, they immediately wash. They particularly dread contagion when he perspires, and what they lay great stress on, is that he has a privy to himself which no one else enters: indeed, my informants say, if one of them took a house and heard that, forty years before, a phthisical family had lived there, they would build up all the privies and open fresh ones. In fact, they set the patient aside to die, and, after death, they burn his effects. They know the disease perfectly when developed, and say it comes oftener in the left lung than the right. Occasionally a wife will not dissociate herself from her husband, or a mother from her child, and then, my informants say, we know that simply she is doomed. The result of all this is that phthisis is decreasing. But before we agree with the Jews that it is contagious, we must not forget that they quite recognise the hereditary influence, and, within the last fifteen years, have been more anxious than before to avoid marriages with infected families. Some good, they say, may have been done by this greater care, but it must be slight; for money or beauty always carries the day. We must not forget also that all this care about the patient probably tends to the general cleanliness of the house, and therefore to the improvement of the general health. With those two exceptions, so far as I can see, the comparison is a fair one; for the conditions of life amongst them are the same now as before; and if one only had statistics available, the experiment might be very valuable. The unanimous opinion is that, before the adoption of these measures, phthisis was increasing, and to such an extent that it alarmed them; and it is also their unanimous opinion that phthisis is now diminishing I give these remarks for what they are worth, and I think they are worth recording; for it appears to be remarkable that a community of eighteen thousand souls should, of their own accord, universally agree to carry out a system so rigorous and so opposed to feeling of affection. It is a strong proof of the firm conviction they feel in the efficacy of the measure.

Parturition.

I have formed the idea, but greatly from guess work, that child-birth amongst the Jews is as frequently complicated as in England, while anything unusual amongst Mahomedans or Christians is as rare as with the lower animals. The difference in this respect between the communities is marked.

"Date-mark."

What is called in this place the "date-mark" is the Aleppo button, and is the counterpart of the Sind and Delhi boil, and disfigures generally in the face every child born in Baghdad, but attacks adult arrivals more commonly in the wrist, ankles, and nose. As a rule, the ulcer is very superficial, though sometimes, depending apparently on the constitution, it sloughs to the bone. It attacks the baby from the sixth to the twelfth month, and lasts on an average a year, never, it is said, less than six months. The ulcers are sometimes very numerous, running one into the other, and covering the whole of the upper lip or chin, or forming a great patch on the forehead; but, as a rule, they are very superficial, and the scars left shew how little of the true skin has been destroyed. Still it is very rare to meet a woman or a child in Baghdad marked so slightly as not to be disfigured. Those that slough deeply carry away occasionally a portion of the eyelid or both

wings of the nose, but I have never known the eyeball attacked. Dogs are attacked by it, about one in every five, on some portion of skin not covered by hair, generally the nose, and it seems to be more severe on them than on man generally, carrying away a large portion of the nose. Out of three sky-terriers I brought here, one got it in the nose, and the ulcer passed down the throat and killed the beast. Horses and cats escape. The natives divide the date-mark into male and female, the male being the superficial, and the female the sloughing ulcer. Their medicines for it are legion and acknowledged ineffectual, yet, though they know the sore must run a certain course, and will heal of itself with a smaller scar if left alone, still they must torment it in their desire to do something. The Jews have tried inoculation, and I give those of their experiments I have seen in the form of a table. Their mode of operating is to take the pus from an ulcer three to four months old on a fine needle, and make ten or twelve pricks. The ulcer thus formed lasts on an average five and a half months, and with the exception of two cases, where one and two ulcers appeared within an inch of the original ones, and at the same time in none of those experimented on has the date-mark appeared elsewhere.

TABLE showing Inoculation for the "Date-mark."

Sex of Patient.	Age when inoculated.		Where inoculated.	Duration of Ulcer.	Present Age.		Remarks.
	Years.	Mths.		Months.	Yrs.	Ms.	
Female ...	4	...	Left leg ...	3	12	...	Another ulcer appeared one inch above, but healed before the inoculation.
Ditto ...	1	6	Right leg ...	12	3	...	
Ditto ...	3	...	Left wrist ...	6	8	...	
Ditto ...	7	...	Ditto ...	5	9	...	
Ditto ...	2	...	Left leg ...	4	9	...	Two other ulcers appeared within one inch of the original, and healed with it.
Male ...	3	...	Right wrist ..	5	4	...	
Female ...	1	10	Ditto ...	6	2	4	
Ditto ..	1	6	Leg ...	4	4	6	

The experiment, however, is by no means free from error, for the children taken are those few who have escaped babyhood without getting the disease, and it may be said that perhaps they would escape altogether—this the Jews deny—or that they have not been inoculated sufficiently long to shew that the disease will not yet come. One thing, however, is certain that the experiment has so far satisfied the Jewish community that they say it is probable they will inoculate this coming cold weather every child between three and four months old, and if the operation prove successful and a year will shew, it will be a great benefit to the locality, and not only save the beauty of the person, but will preserve it from months of loathsome ulcers.

Plague, 1773.

The first authentic account I can get of plague in this province is in 1773. *It lasted for five months, from January till May, and is believed to have carried off two millions of the population.* * * * * * * * * *

1800-02.

Twenty-seven years after, in 1800, *it re-appeared and lasted from April to July of that year. In May* 1802 *there was a further outbreak of the disease.* * * *

1831-34.

For twenty-nine years it was absent from the country, but in March 1831 *it re-appeared in Baghdad, having, it is believed, travelled from Egypt through Syria. It raged in the city for more than a month, and the misery it produced was greatly aggravated by the inundation of the river Tigris, which rose thirty feet above its low level. During that and the following year it continued to shew itself in various parts of the province. In* 1833 *it was altogether absent, but in* 1834 *there was a slight recurrence of the pestilence.* * * * * * * *

1867.

In the beginning of May 1867, a report reached this that a strange disease had appeared in some villages in the neighbourhood of Kerbella. I went there accompanied by a Turkish Commission consisting of the European Director of the Sanitary Department, an officer of health, and two Surgeons of Turkish Regiments. The district in which this disease appeared is 60 miles long by 20 broad, and lies south-east from Kerbella. It is devoted almost entirely to the cultivation of rice and is irrigated by a large canal, the Hindeah, which carries off half the waters of the Euphrates. In early spring, when the Euphrates rises from the melting of snows in Armenia, this district is completely under water, and the little villages of reed huts are scattered about on the banks of ancient canals. This was the state of the country when I visited it in the end of May, and I had to paddle about from village to village in a small canoe made of reeds covered with bitumen. In my first round of visits I was accompanied by the Commission. The first village we examined was Haji Oofee. It was on two mounds four hundred yards apart separated by water. The part examined consisted of about 20 huts, and in this of five people attacked three women died, and one man and a woman recovered, the man had fled to a neighbouring village called Kharakjhee, and the woman was invisible. As the other division of the village was nearly deserted, we neither went there nor did we gain any information as to the number who had died. Two old men said they had not seen this disease for 36 years, and it was undoubtedly the plague. After Haji Oofee we visited the village of Sheik Zeib, containing 200 inhabitants. Here 13 people were attacked, and ten died; of the recoveries one was a child 4 to 5 years old, but nothing was visible unless a gland in the axilla slightly enlarged; another a man of 40 had a gland in his left groin slightly enlarged, it had been the size of a filbert. The other recovery was a woman, and one of the Commission, a Surgeon who had seen the plague, was permitted to examine her, but without result. The ten who died succumbed from the 3rd to 6th day. No one had been taken ill since 25 days before our arrival. From Sheik Zeib we went to the village of Haji Nasr. Here we found a man Hasmi Boosinkha by name, who, having lost two daughters within 36 hours at Sheik Zeib, fled hither with the remains of his family, but his wife was attacked with buboes in the groin which never opened, and she died in six days, then two more daughters died within nine days, the buboes unopened; but in the case of his son, a boy about six, the bubo in the left groin suppurated and he recovered. Thus here in a family of seven, six were attacked and five died. Nothing could be seen in the son unless a scar in the left groin with slightly undurated edges. Pain in the groin or axilla, enlargement of the glands, fever, some delirious, others semi-comatose, were the symptoms, and the father who alone escaped described how his children vomited a mass of black blood and then died. These visits were paid on the 20th and 21st of May, and the Turkish Commission satisfied itself, as they expressed it, that it was the "veritable plague." Not being myself, however, quite so sure, and being anxious, if possible, to see a case, I determined, as the Commission prepared to return to Baghdad, to prosecute alone further inquiries, which were afterwards embodied in their general report. So on the 26th, five days after, I again visited Haji Oofee, Haji Nasr and Sheik Zeib, besides Kharakjhee, where the man who had recovered at Haji Oofee fled to, and a number of other villages scattered about, and I now found that the disease began in the middle of March in Doum, a village in the very heart of this cluster, and it confined itself to Doum for a month before it spread further. Here in Doum a few died, and the disease disappeared for 8, 9 or 10 days, re-appeared, more people died, and again it disappeared for a like period, and thus it went on in all the villages it attacked except Sheik Zeib, where the people dropped off rapidly one after another. Doum contained 300 persons, and, after losing 20 in a month, the whole village fled in a northerly direction, and it was then that the disease spread to Haji Oofee, Sheik Zeib and Kharakjhee; Haji Oofee containing 500 persons had lost 20, and Kharakjhee containing 350 to 400 had lost 60 to 70. In all it was believed that 300 persons had died in the district up to the time of my arrival. Haji Oofee itself had lost no one since my last visit, but in the other part, 400 yards off, a woman, Beluja, wife of Nejmil-Mustafa, had died two days before, and her friends and relatives

told me that while making bread in the middle of the day, she felt as if struck by some one in the right groin, there was extreme pain, and a gland swelled to the size of a walnut. This swelling went down in the night, but the pain remained as before. She had constant fever, heat across her body inside like a piece of fire, extreme thirst, tongue white like a piece of cotton, but not swollen. She could not talk, head shaking from side to side, she looked like one drunk, eyes swollen and inflamed, sordes collected about the teeth, and bowels confined, urine copious but yellow, and breathing natural till just before death. Next morning she vomited a fluid of a greenish and white colour, and then eight times blood, till she died at mid-day, thus having been ill 24 hours. At Kharakjhee I found that a girl, five or six years old, named Echteme Bint Allowee, had died 30 hours before my visit, and this was the attendant's description of her case:—She was taken ill at four in the morning with pain in both groins, but not in the armpits, and something swelled in the left groin. She got fever which never left her till her death; she was delirious and never talked. Her tongue was white, and they particularly remarked sordes about the teeth. The urine was natural; her bowels were never opened, and her breathing was laboured during the whole time as if of one dying. Her eyes were red. There was no vomiting on the first, but on the second day she vomited much blood, about four pounds by the description, and died at ten o'clock at night, having been ill 42 hours. Here also another girl, four or five years old, named Lufta, daughter of Sheik Jabur, died the day before my visit; she, however, had been ill a month and a half. She was said to have suffered exactly from this disease, but the swellings in the right groin suppurated, and she recovered, dying eventually exhausted by the discharge from the ulcer. I now come to the case which I myself saw. A man about 40 years of age, named Hamadi-ibn Hamoud, was taken ill on the 18th, eight days before I saw him, with diarrhœa, passing, as he described it, nothing but blood and fat every two minutes. On the evening of the 20th this ceased, but he had fever all night, and in the morning he discovered on the outside of his right arm, above the elbow, a red spot about the size of a sixpence; this became black, the fever continued; he was not, however, delirious, and the breathing was natural. On the 23rd, fever left him, and he began shaking without cold; his tongue became white and dry, and he could not move it. He had great burning pain in the belly and intense thirst, pain also in the groins, but no swelling, and neither pain nor swelling in the axilla. The ulcer meanwhile continued to enlarge, and the fever became intermittent; the hot stage lasted about one hour, and the sweating twenty minutes, and this went on without any intermission. For five nights he never slept, but the night before I saw him he slept soundly, and the fever had left. He was very much emaciated, and appeared to me to be suffering simply from a large carbuncle on his arm. The carbuncle was about four inches in diameter on the outside of the right arm, one inch and a half above the elbow. It consisted of a pink ring an inch in diameter, and inside of that a black slough covered with shreds of cuticle. There had evidently been considerable swelling as the pink ring was wrinkled all over. It was laid down as a rule by those with whom I conversed that when buboes ulcerated, or an ulcer opened elsewhere, the patient recovered, otherwise he died. All, with one exception who remembered 1831, said this was undoubtedly the plague, and they had not seen it since then. The exception was Sheik Zeib, chief of the village of that name He stated that he had seen the plague before, and this was quite different; no glands ulcerated in this case, and generally it appeared another disease, but he had seen nothing like it before. It may be remarked that no mention is made of petechiæ. No inference is, however, to be drawn from this, as the Arabs evidently did not distinguish them from flea-bites, and in order to get at the truth I was careful never to put leading questions. I now arrived at the conclusion that this was without doubt the plague, and that it was still confined to a circle of villages close together; it might possibly be exterminated by surrounding those villages and hunting up the Doum people and doing the same with them. Instead, an imaginary "cordon sanitaire" was drawn many miles along the river Euphrates

and quarantine of 15 days established. The disease ceased end of June or beginning of July. * * * * * * *

1871. The Sanitary Inspector of the Province telegraphed to the Pasha on September 12th from Suleimaniyeh that he has visited the circle of villages in Persia, about fifty miles from the frontier, at Suleimaniyeh, and that the disease reported there is, in his opinion, actually the plague; that it has been there since the winter, and appears to be travelling towards the frontier where quarantine has been established. A very intelligent eye-witness who knows the plague writes,—That besides the characteristic bubo which becomes livid, hard and angry twelve hours before death takes place, spots like the size and form of a lentil, black as ink, cover the body, and once these appear there is no hope. The number of deaths to those attacked is suspected to be 80 or 90 per cent.

With regard to protection from plague, I infer, from the foregoing and from conversations with those who passed through 1831, that if the household be small and intelligent, the house can be shut up with comparative safety, keeping watch day and night to shoot cats and other vermin entering the premises. But if the household be large, flight is the only means of safety. I also infer that plague can spread at a higher, and probably at a much lower, temperature than given by Sir Gilbert Blane, and that it can exist, if in abeyance, from spring to autumn with an average maximum temperature during July and August of 103° to 107° Fh. in the shade, and that, though it seems to be feeble the second year, that appears to be due more to the want of victims than to any inactivity in the disease itself, as we see when it attacked Busreh in 1832. We see also that, unburied after two years, it resumes its activity.

We may also infer, I think, that we have no reason to suppose this province will never be visited by plague again; that it shews a tendency to extend more and more eastward from this, that is towards Hindustan; and that, with river-steamers from Baghdad to Busreh and mail-boats from Busreh to Bombay, the danger of its getting to India is greater than before.

There can, I think, be no question as to the value of a strict quarantine, though I am unable to say of how many days, for this disease, so far as I can learn it, seems to be propagated by contagion only, and any expense to establish quarantine, any inconvenience to individuals, derangement of trade or loss to merchants could never weigh against the risk of admitting such a pestilence.

Plague cannot now, however, again commit the havoc in this province it did, for in 1773 it is said to have killed two millions, while the whole population of the province is at present barely one million. In Busreh and the villages round, it killed 200,000, while Busreh and the villages round now contain only 20,000, if so many people.

Cholera. I shall now give, so far as I can, the history of cholera in this province.

1821. On 13th of July 1821, the Resident at Busreh informs the Senior Officer of the Hon'ble Company's cruisers that as the importation of cholera is dreaded from Muskat, the local Government has ordered a quarantine, time not given. On August 6th, a sepoy of the Residency Guard dies, and on the 11th the cruisers go to the island of Karrack, as they have lost some of their men from cholera till the disease abates in Busreh.

1822. Colonel Taylor, the Resident, writing on the 5th December, says:—"The cholera has committed dreadful ravages throughout Persia; it put an end to a hitherto successful campaign of the army of Kermanshah against Baghdad, which, having reached the Tigris nearly opposite the city, was suddenly dispersed by an attack of this dreadful disease which has advanced as far as Diarbekir on its way to Europe."

This year cholera came from Persia by way of Kermanshah and Khanikin, and appeared in Baghdad on the 18th of September.

1846. It lasted forty days and disappeared on the 28th of October. Out of a population of 80,000, it attacked 20,000, and at least 6,000 died. On the 22nd of October, five undoubted cases had occurred in Mosul, the disease got to its height about November 5th; and on the 16th it was said simply to exist "at times quiet and then suddenly appearing." There were from seven to eight hundred deaths. The disease passed on to the villages on the Hazir river to the north-west.

On the 8th of June, cholera appeared on the Island of Bahrein and in the town of Koweit, and on the 18th in Busreh, where

1847. it remained till 18th July. It spread in all the villages round and then passed up the banks of both Tigris and Euphrates, and "the march was pretty regularly progressive," and attacking by the way Hillah, Kerbella and Nejef, it appeared in Baghdad on September 10th, and lasted 35 days, ceasing on October 15th. At this time about 1,000 persons were attacked and 150 died. On the 15th of November it appeared in the barracks of the troops at Mosul and then spread to the town, ceasing altogether on the 11th December. The deaths in Mosul did not exceed two hundred. The disease then went to Koi, Sanjak and to Jezireh to the north-west.

Cholera this year appears to have broken out at Busreh on or about the 10th of June, but as our Agent then died there are no

1851. particulars. By the 1st of July the disease was there beginning to abate after carrying off 800 persons, but it spread to Mohamrah and to Sheik-il-Sook on the Euphrates; from Sheik-il-Sook it went to Nejef, and then appeared at Hillah. On September 11th it broke out in Baghdad, and on that day there were six fatal cases. The disease lasted fifty days, disappearing on the 1st of November. In that time 1,847 deaths were recorded. It then passed northwards to Kifri and Kerkook.

Cholera made its appearance in Baghdad on or about the 12th of December, but the number of fatal cases was very limited.

1855. "It is remarkable," Sir Arnold Kemball writes, "that the Pashalic was free from the epidemic until the arrival of the Haj Caravan at Nejef and Kerbella about six weeks ago. The disease, it appears, had prevailed with great virulence at Mecca during the season, and some of the return pilgrims had fallen victims to it *en route*. At Kerbella and Nejef its effects were marked with greater severity than at Baghdad."

Cholera which had been noticed advancing for some time from Persia shewed itself in Baghdad on or about the 2nd of

1856. October, and it disappeared on the 5th of November. The attack was very mild, the mortality being on an average only five a day, 170 deaths in all being recorded. About the 10th of October a body of 3,000 pilgrims having arrived at Khanikin on the frontier from Persia, found the term of quarantine extended from 5 to 15 days. After some skirmishing with the Turkish irregulars they forced a passage and advanced towards Baghdad, when Reshid Pasha sent out a regular regiment and two guns. But an arrangement was come to on the pilgrims promising to encamp without the walls of Baghdad till the term of quarantine should expire.

Cholera coming from Persia by Khanikin appeared in Baghdad, Kerbella and Nejef about the 16th of October, but the average

1857. number of deaths in Baghdad did not exceed five a day. In Kerbella, however, with a fluctuating population of 30,000, when the disease was at its height, for 12 days, the deaths were 100 a day; and at Nejef, with a fluctuating population of 18,000, during the same time, 30 a day, but these were chiefly amongst Persian pilgrims. The disease disappeared about 25th November. At the time of its appearance here, Busreh and Bushire were free from the disease, as also Khanikin, Kermanshah, Hamadan, and Teheran,

although it was reported to have committed great ravages at Meshed, Yezd, and Shiraz in the summer.

1858. Mr. Taylor, Vice-Consul, Busreh, writes that cholera commenced at Mecca, and reached El-Hissa (Lahsa) after raging for some time among the Assyr and Harb Bedowins by the way of Nejd; then taking the coast line of the gulf on the Arab side, it reached Koweit and from thence Mohamrah. It appeared in Busreh on the 10th of September, and ended on the 12th of November. Between four and five hundred of the inhabitants of Busreh were carried off by it, but the principal proportion of deaths occurred amongst the slave population. From Busreh it went to Kurnah and Sheik-il-Sook, where it was said to be in the middle of December, and there it ended.

1861. Cholera, travelling in the track of the pilgrims from Persia, was successively announced at Teheran, Hamadan, Kermanshah, and Khanikin, and declared itself in Baghdad on the 28th of September. The attack was very mild, at no time exceeding eight deaths a day, and disappeared from Baghdad on the 6th of November. On the 20th November it was said to be occasioning considerable mortality at Kerbella and Nejef.

1865. Cholera advanced from India along the north shore of the Persian Gulf as far as Assaloo, which it reached in September, and there it ceased. But it came along the southern shore to Busreh, which, when I wrote a report on it in 1866, I did not know, though Sir Arnold Kemball's investigations have shewn it. When, however, it appeared in the gulf, it was carrying off thousands of pilgrims at Mecca and Medina; from there it passed north-east along one of the Haj routes, attacking the Wahabee town Aneyzeh, and onwards to Riad, the Wahabee capital. The inhabitants of this town, clean though it was, for I saw it just before, suffered severely. It then passed north-east, through the various tribes under the Wahabee rule, to a small village called Jaharah 20 miles west of Koweit. At this time the Mutyr and Beni-Khalid tribes, tributaries of the Wahabees, were encamped round Jaharah to the number of four or five thousand tents, and they suffered severely. Cholera appeared in the neighbourhood of Busreh, 25th or 26th of August, and carried off about five per cent. of the inhabitants and strangers in the town, and the Dthefyr, a Bedowin tribe, lost its chief, his son, and many men. It then passed along the line of the Euphrates, shewing itself successively at Sheik-il-Sook, Samawa, Diwaniyeh, Nejef, Kerbella, and Hillah, and appeared in Baghdad, September 25th; and after carrying off 300 persons it disappeared on November 11th. The slightness of the attack in Baghdad is in a measure attributed to the troops having been camped out. The disease passed through the intervening villages and Kerkook, and reached Mosul on the 23rd October.

1869. Cholera appears to have been brought into Baghdad about the 20th October by Persian pilgrims who are said to have forced the quarantine. The disease confined itself to Baghdad, Kerbella, and Nejef, carrying off, as reported, 46,183, and 143 persons respectively. It disappeared in the beginning of December.

1870. This year cholera came from Persia by way of Khanikin, and appeared in September at Kizil Robat, a village of about 800 inhabitants, 16 miles on the way from Khanikin towards Baghdad, and for 10 days five or six people died daily; and in the beginning of December there were a few cases at Nejef.

1871. This year cholera being at Bushire, quarantine was established at Busreh on the 2nd of March, but on the 17th the disease appeared. The attack has been on the whole mild, the number of cases reported being 330; but the disease still lingers in Busreh and the villages round. About the middle of May it gradually crept up the banks of the Euphrates and Tigris: on the Euphrates, attacking in order the

villages of Sheik-il-Sook, Samawa Dewaniyeh, Hillah, Nejef, and Kerbella; and on the Tigris, Kurna, Amara, and Kut-il-Amarah, with the intervening Arab tribes, and appeared in Baghdad on the 13th of June. Here the disease has been very mild, seldom more than five deaths daily, the whole number till now reported being 128. But, as in Busreh, it still lingers here, and though during August it almost disappeared, it has set in again with the cooler days of September, and I hear of one, two, and three deaths daily. Kerkook, with a population of 25,000, lies midway on the road between Baghdad and Mosul. It is built on rising ground, and watered by two fast running streams one on either side of it, but one stream is dry in summer. On the 25th of July a heavy thunderstorm broke over the town, and a little after sunset rain fell in torrents for half an hour, but for that time only and two hours after the clouds had dispersed, and the sky was clear as before. This was a most unusual and unheard of occurrence at this season of the year, and up to this time there was only the ordinary sickness and mortality in the town. But on the 30th cholera broke out, and for 15 days "raged with extreme virulence, carrying off 60 to 70 souls a day, in each case the victim suffering for four hours, not more." It then decreased during a period of eight days till it reached only two a day. In several instances whole families were swept away.

This outbreak of cholera at Kerkook has made a great impression on the natives here, and though I expected it, and about that time, yet the suddenness and the violence of the attack would seem to have something to do with the rain-fall which was certainly unusual, and I was inclined to think that the water falling on the mass of animal and vegetable matter which covers the streets and outskirts of the town, with a temperature of 140° Fh. in the sun, would perhaps somehow account for this. But a highly intelligent Persian lady with a wonderful memory, wife of the late King, Mahomed Shah, tells me that in 1843, when cholera appeared in Teheran, her husband marched with his family and camp towards Lar amongst the hills. There were a few cases of cholera, but one night, while still on the road, it rained heavily, and next night cholera burst forth with such violence, she says it was frightful; no sooner were the people ill than they died, the whole camp was in disorder; 60 of her own followers round the tents died, and when she looked from the tent door, she had to cover her face with her hands. The disease rapidly decreased. This was a very unusual fall of rain, for the hot weather had begun. They reached their destination and remained two months, when hearing nothing more of cholera, they determined to return to Teheran. They had marched a few days when rain similar to the first fell, with the same results. Though these are but the recollections of 28 years ago by a Persian lady, still I look on the facts as substantially correct, sufficient at least to shew that the accumulated filth of years was not a necessary ingredient of whatever favoured the outburst at Kerkook.

Baghdad, 29th March 1871.

The most important deduction to be drawn from the foregoing in regard to this province is the value of quarantine. In letter, as per margin, I tried to describe what I saw of it on the Turco-Persian frontier. At the port of Busreh, however, quarantine is conducted somewhat differently. Busreh, it must be remembered, is 70 miles up the combined Tigris and Euphrates, and the whole of the left bank of that river, from the mouth to within 18 miles of the town, is Persian soil. On board the roomy mail steamers and square-rigged vessels arriving at the mouth, a quarantine man is placed to prevent boats going alongside, but that is a mere show, and what Sir Arnold Kemball wrote in 1858, referring to a letter of Mr. Taylor's, holds good to-day:—"And if it be true that the establishment is inadequate, and the authorities powerless to prevent hourly communication between the inhabitants of the Persian and Turkish banks of the Shat-el-Arab, as well as between Arabs coming from the sea and the villages on the right bank of the river for a distance of 70 miles to Busreh; while, on the other hand, the Maadan and Chaab, Arabs, by way of retaliation, fumigate with buffaloes' dung and rice straw every Turk and citizen who may fall into their hands, exacting

from each a certain sum of a money. Such circumstances illustrate at once the futility of a similar measure in a sanitary sense, and the little real control enjoyed by the Ottoman Government beyond the environs of towns and the ground actually occupied by its troops." The internal quarantine lately placed on the Tigris was a perfect farce, considering that before its imposition cholera passed more readily up the Euphrates than the Tigris. I desired to get a list of the quarantines established in this province during the last 20 years, but the sanitary department is either unable or unwilling to furnish it. My intention was to attempt to get some idea of the value of the measure by comparing the visits of cholera with the imposition of quarantine. But had I got the list, the value of such a comparison may be judged of by the following. The Acting Political Agent, writing on the 14th March 1860, says :—" I have nothing to report with the exception of the removal of the quarantine which was established some years ago by the Turkish Government on the frontier of Persia." Again, the Political Agent, writing on the 25th September 1867, reports the establishment of quarantine at Busreh "on the ground officially stated that cholera had declared itself in a Persian city within 70 miles of the Caspian," and nowhere else. So much for Turkish quarantine in Turkish Arabia.

I have recorded 14 different visits, all I can find of cholera, to this province, and I shall now attempt an analysis of them. Cholera has entered from three directions : one direction is from Persia by Khanikin, now Khanikin is the frontier town on the road leading to Kermanshah, Hamadan, Teheran, Asiatic Russia, and Afghanistan ; another is across the desert of Arabia ; and the third by Busreh, or, if I may say it, from seaward. But in making this analysis, I exclude the two first attacks, as the information about them is very imperfect, and for the present I also exclude the third, that of 1846, as it appears exceptional, so that eleven visits remain as seen by this table :—

Cholera entered this province from

Khanikin in	Desert of Arabia in	Busreh in
1856.	1855.	1847.
1857.	1858.	1851.
1861.		1865.
1869.		1871.
1870.		

Five of those visits came from Persia by Khanikin, and it will be remarked that all were mild, and that the disease kept in a given track through Baghdad to Kerbella and Nejef, following the route of the pilgrims to those shrines and confining itself chiefly to them. Twice, in 1855 and 1858, the disease came across the desert, in the first case apparently coming with pilgrims and confining itself to their haunts, and disappearing. In 1858 it appears to have crossed the desert from town to tribe as in 1865, and it seems to have shewn more virulence than in the attack of 1855, for it carried off four to five hundred of the inhabitants of Busreh, and passed up the Euphrates as far as Sheik-il-Sook where it ended. But the four times it passed through Busreh, that is, from seaward, it shewed much more activity, and passed up either the Euphrates or both Tigris and Euphrates, attacking the places *en route* to Baghdad, and on to Kerkook and Mosul.

If any deduction might be made from these few visits, it would almost look as if cholera were sometimes conveyed by human intercourse, and gradually lost its energy when passed through one body to another, for, travelling over Persia and across the Arabian desert, very many people must have been successively attacked, and it appears in this province in the track of the pilgrims who neither wash nor change their clothes *en route*, with apparently just vitality enough to reach Kerbella and Nejef, the destination of those people. While entering Busreh, that is from seaward, it appears to have come with greater virulence, attacking all

indiscriminately, and passing on through Baghdad towards Mosul; and though I know it is not generally conveyed directly by this route to Europe, still all and the only times it has entered by Busreh correspond very closely with all the attacks it has made on England during the last quarter of a century :—

Cholera.

Entered by Busreh in	In England.
1847	1848-49.
1851	1853-54.
1865	1865-66.
1871	1871.

Be that as it may, the disease adheres, reasoning from the premises here given, with considerable regularity to certain given routes. The difference in temperature between September and October is so slight that I do not think that would have any marked effect on the disease In the exceptional visit of 1846, the disease enters from Persia by Khanikin, attacks Baghdad with greater violence than it has yet done, and passes on to Mosul and beyond, just as if it had come through Busreh or from seaward, but we must remember that Persia in that year was attacked with peculiar severity. With regard to 1865, I suppose for the moment that the comparatively mild attack from across the desert was absorbed by the stronger invasion from seaward.

I dread hazarding an opinion on a matter of which I know so little, but I scarcely think the spread of cholera can be due entirely to the water, for here the disease passes up the rivers against the current, literally the only source of drinking-water to the towns and villages on the banks, and the people never polute the waters by relieving themselves in them. The Bedowin, who constantly shifts his tent from one portion of dry desert to another, and whose scanty wardrobe, with all he possesses, is exposed to every breath that blows, is attacked with the same severity as the townsman who lives confined within the four walls of his house and sleeps over his cesspools and his privies. The disease spreads in the teeth of a dry burning wind blowing for weeks in the same direction without intermission.

I should here like to notice a fact, though it is without the limit of the province. Kirrind, a little town of about 400 houses, lies on the high road between Baghdad and Kermanshah. It is situated in a cleft on the south side of one of those ranges of mountain limestone supporting the table-land of Persia. The sides of the cleft rise at an angle of 45,° and the houses are distributed equally on either slope. The whole being rock, masses of boulders and lime are put together so as to form building substances. The houses are exactly alike, small, flat-roofed and two-storied, with a stair in the centre, and a little room seven feet high on either side, and above that a room on either side still lower, with a crib in the middle above the stair. In front of every house is a small courtyard. Now one stream gushes from the gorge and dashes down between the two divisions of the town, while innumerable little ones spring from the west side of the cliff and pass through every cook-room, privy, and courtyard, and down the centre of almost every street on that side. The east side of the town is dry. Now, Dr. Tholozon, who passed through this town end of last year, two months after myself, and just after it had been visited by cholera, tells me that though the disease attacked the place with proportionate severity, it confined itself entirely to the east side, not one case occurring on the west side, where the streams drain houses and streets. I give this observation for what it is worth, believing it to be a curious fact, but not enough to build a theory on, even if one knew what inference to draw, merely remarking that I feel quite as much faith in Dr. Tholozon's judgment as in my own.

Vaccination.

The Bombay Medical Board, writing on 1st August 1801, says that small-pox from inoculation is certainly a much more dangerous disease in India than in Europe; that a third of those who get the disease naturally die from it; that the Board has made

several attempts to get vaccine lymph to India, but without success; and now recommends the trial by Constantinople, Baghdad, and Busreh, performing vaccination at those places so as to send fresh lymph from them. Sir Harford Jones, Resident, writing on the 18th April 1802, says the operation of vaccination has been successfully performed at Baghdad with some matter received from Dr. de Carro at Vienna on the 30th ultimo, and he sends fresh vaccine lymph express to Busreh for conveyance to India, recommending that vaccination should be kept up on board by lascars if any had not had small-pox, otherwise by paying native children to go. The lymph arrives safely at Busreh, April 25th, and on the 5th of May Dr. Milne sends fresh supplies by the *Alert* to Bushire, Muscat and the Presidency; he again sends by four following vessels till September 1802, when the establishment of vaccination is publicly notified in the *Bombay Courier*. Dr. Short, the Civil Surgeon, passed the lymph on to India, but did not succeed in establishing vaccination in Baghdad, for I have got here a curious family document in French, dated Julfa in Persia, 1st March 1828. It is written by M. J. De Murat, a French trader who arrived here, and having married the daughter of the Dragoman to the French Consulate had a son, Cæsar. He says:—"I have the honor to declare that it is with a great deal of trouble that I have introduced vaccination into Baghdad in 1809, on account of the fanaticism which opposed itself to this salutary invention of the celebrated Mr. Jenner as opposed to predestination. It required the interposition of the Grand Mufti le Sage Ahmed Effendi, who, persuaded by my solicitations here, produced children and his little infants to the number of six, on whom I performed after the manner I had operated on Cæsar." Not content with success in Baghdad, he instructed natives of Mosul and Ervan. He declares that up to 1819 he had vaccinated over 4,500 infants, about two-thirds of them gratuitously; and at that date being invited to Persia to be Interpreter in Chief to the Prince Royal of Kermanshah, he left the conduct of vaccination in Baghdad in the hands of his wife, who had operated a good deal. At Kermanshah he vaccinated over 500, and amongst them 25 princes and princesses of the Khajar family, who gave him a magnificent certificate. After four years the Prince of Kermanshah died, and M. De Murat wandered to Hamadan, Teheran, Kashan, and on to Ispahan and Julfa, where he appears to have ended his days. He vaccinated at all those towns, and kept up vaccination at Julfa, which is an Armenian village on the outskirts of Ispahan, then a populous city, and he sent regular reports to Dr. (now Sir John) Macneil, then Surgeon, H. M.'s Legation in Persia. Meanwhile, Madame De Murat was not fortunate in Baghdad, for "silly women and ignorant men would meddle in it despite the opposition of Madame De Murat, using bad inoculations, and without distinguishing the true from the false; the art becomes useless and dangerous, and lost its credit in consequence of deaths caused for the most part by the contagion of small-pox, and the public lost the confidence inspired by myself and my wife with so much trouble." At this crisis Mahomed Saleh, originally servant to Dr. Hyne, Residency Surgeon, and afterwards Vaccinator in the pay of the Hon'ble E. I. Co. at Busreh, arrives, but he dies here prematurely, and the story ends. Though he does not say so, I believe De Murat got his lymph from Dr. Milne at Busreh, and vaccination was kept up in Busreh till 1829. One of the silly women in the story, Helani by name, appears, however, to have secured good lymph, for she began vaccinating in 1822, and after 10 years retired on a competency in 1832, handing over her practice to her assistant, a Native Christian woman named Lucy. The mode of performing the operation at that time was to prick the skin with a sharp piece of silver, and afterwards introduce the lymph with a quill. But about this time a female relative of Sultan Mahomed arrived in the suite of the Pasha of Baghdad, and in order to propitiate heaven distributed bundles of unarmed bone-points which are now in use. Lucy has practised till now. During the greater part of the time she had a monopoly of the business, and has accumulated considerable wealth, and on her retirement from practise some months ago she gave eight thousand rupees to her Church; and though she cannot now resist vaccinating, she devotes her-

self gratuitously to the poor. Lucy tells me she uses the same lymph her mistress began with 48 years ago, and she sees no difference in it; the failures are as before—one, two, or three in a hundred. She takes the lymph from the vesicle on the eighth or ninth day. When she practised, her fees varied from a quarter of a rupee up to twenty. Inoculation is now unknown. At the present time there are twenty vaccinators in Baghdad, all women. The people are very desirous of being vaccinated, and all are, unless a numerous class of poor Arabs in and about the city to whom the fee is a consideration. A few vaccinators to practise amongst those people gratuitously would be a great blessing, but we should be unable to do it, as I feel certain we could not verify the work without exciting the jealousy of the Turks, and if the local Government itself took it in hand, it will probably pay the vaccinators just long enough to enable them to drive the private practitioners from the field, and so not improve matters. I do not know whether women are used as vaccinators in India, but it strikes me they would have many opportunities of vaccinating and getting introduction into harems, where men dare not penetrate. Small-pox amongst those vaccinated is, I understand, a disease unknown here.

Prostitution.

The prostitutes, who are derived in about equal proportions from the various religions, are not placed under regular surveillance, but are subject to the caprice of the head authority and his police agents. Namik Pasha in a fit of religious zeal sent boat loads of these unfortunates to Busreh, and six months ago the present Governor drove some seventy from the town, a few went down to Bombay, and the rest distributed themselves in the villages round, watching for better times when those who can will probably return to their old haunts. The result of this is to encourage prostitution and throw the field open to fresh enterprize, for the only thing that prevents the immediate supply of the demand thus created is the fear of temporary banishment, for the trade flourishes and many a strumpet owns houses and lands in her own right, and makes what is considered a highly respectable marriage. But those are only the notorious prostitutes who are expelled the town, and I really fear that any guess one would venture to make at the amount of secret vice would be under the mark. New-born babes are frequently left at the doors of the mosques, sometimes with the cord not severed. I know now a child that attracted the attention of a compassionate native from the dogs pulling about the placenta. But this is the exception, the rule is to produce abortion, and I have frequent visits from females asking for medicines for the purpose. They cannot understand that there is any thing wrong in it, and they come to me either trusting to greater secrecy or perhaps to save the fee which the regular female practitioner, a specialist in her way, charges. The fee increases with the age of the fœtus, being at the rate of two rupees and a half for every month. In fact, so long as a woman is considered a chattel, and placed under a sort of restraint, but allowed at the same time to go visiting and shopping with face and figure hid in a coloured sheet, I should be very sorry to draw the fine between virtue and vice, and indeed the natives themselves make little or no distinction. I have since my return from Europe lunched at the same table with an elderly gentleman of rank, three highly respectable Christian families, a marriageable daughter with them, and a well known woman of the demi-monde, and no one thought it *outre*.

Municipality.

About three years ago a Municipal Commission was appointed for Baghdad. It consisted of a President, Vice-President, and four Mahomedan Members, one Christian and a Jew. In describing the citizen of Baghdad I was anxious to give an idea of the amount of intelligence probably brought into council by an average member, but the members have all drafted into other appointments, and never replaced, and the Commission has dwindled down to the President alone. The revenue is derived from taxes on houses and shops, markets, and some small items, and amounts to five thousand pounds a year. About five hundred pounds is spent on watchmen, and the same for lighting the chief streets, and seven hundred on sweepers.

There are thirty sweepers, a small enough number for the size of the town, but till last winter they were ably assisted as scavengers by the dogs, but the dogs alas! have died of want, for the starving poor of our own species during the scarcity in the past cold weather were driven to grub in the streets for food, gathering bones indiscriminately and grinding them for food. There is neither a water-supply nor a fall for sewers, but the privies are particularly well adapted to the dry-earth system of Moule, and the whole expense to the house-holder would be only a donkey-load of earth on an average every month, and a scoop, for though the privies would require probably to be emptied oftener than once a year, the contents would be much more valuable as manure; but the introduction of that or any other system would require management, as the poeple not unnaturally look with great jealousy on every innovation. Burials are not now permitted within the precincts of the town, and the bodies of dead Persians brought from distances sometimes in great numbers on their way to Kerbella and Nejef, two in a box, in various stages of decomposition, are now no longer allowed to lie in caravanserais in the heart of the city, awaiting the convenience of travellers, or indeed even to enter the town. The slaughter-house which has been placed very properly at the lower end of the town on the river bank would be perfect in its way, if only a brick flooring were made with a gentle slope into the river, so that a pail of water after each slaughter would keep the place perfectly clean, instead of allowing the blood and offal to sink into the earth. There is no general inspection of meat, but the Jews are very particular in what they kill, and if they detect any blemish, even the slightest, I believe the animal is rejected, but the killer is surrounded by second-rate Mahomedan butchers who are ready to bid for anything, and what the Jew rejects the Mussulman eats. The average consumption of meat is about 24,000lbs. a day, besides fowls, of which the Jews alone kill daily 600 or 700. With these stray remarks I must, for want of materials, bring this report to a close.

NOTE.—Passages in italics marked with an asterisk have been abbreviated from the original report.

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No. 5 of 1872.

SUPPLEMENT TO

The Gazette of India.

CALCUTTA, SATURDAY, FEBRUARY 3, 1872.

OFFICIAL PAPERS.

A SUPPLEMENT *to the* GAZETTE OF INDIA *will be published from time to time, containing such Official Papers and information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.*

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT *separately on a payment of six Rupees per annum if delivered in Calcutta, or ten Rupees eight annas if sent by Post.*

No Official Orders or Notifications, the publication of which in the GAZETTE OF INDIA *is required by Law, of which it has been customary to publish in the* CALCUTTA GAZETTE, *will be included in the* SUPPLEMENT. *For such Orders and Notifications the body of the* GAZETTE *must be looked to.*

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

EQUIVALENTS OF METRICAL WEIGHTS AND MEASURES.

I have received from Mr. Chisholm, the Warden of the Standards, the following figures as those that are finally adopted by the Standards' Commission.

The metre is the length of the French standard at temperature 32° Fahrenheit.

The yard is the length of the English standard at temperature 62° Fahrenheit.

The metre, when compared to the yard, both having a temperature of 32° Fahrenheit, is 39·37079 inches. The metre at 32° Fahrenheit, compared with the yard at 62° Fahrenheit, is 39·382 inches and this is the correct equivalent for use. This modification of the usually accepted figures leads to the following changes:—

		Old Equivalent.		*New Equivalent.*	
1 Kilometre	=	0·621382	Mile.	0·62156	Mile.
1 Metre	=	1·093633	Yards.	1·09394	Yards.
		3·280899	Feet.	3·28183	Feet.
		39·370790	Inches.	39·38200	Inches.
1 Mile	=	1609·315	Metres.	1608·850	Metres.
1 Yard	=	0·91438	Metre.	0·91412	Metre.
1 Foot	=	0·30479	"	0·30470	"
1 Inch	=	0·02539954	"	0·2539231	"
1 Square Decimetre	=	15·50059	Square Inches.	15·50942	Square Inches.
1 Square Metre	=	1·19603	" Yards.	1·19671	" Yards.
1 Are	=	10·7643	" Feet.	10·77043	" Feet.
1 Hectare	=	119·60332	" Yards.	119·67144	" Yards.
		2·47144	Acres.	2·47255	Acres.

		Old Equivalent.		New Equivalent.	
1 Square Inch	=	0·06451	Square Decimetre.	0·0644765	Square Decimetre.
1 Square Foot	=	0·092890	„ Metre.	0·0928461	„ Metre.
1 Square Yard	=	0·836097	„ „	0·83561	„ „
1 Acre	=	0·40467	Hectare.	0·40444	Hectare.
1 Square Mile	=	258·98944	Hectares.	258·8400	Hectares.
1 Cubic Metre	=	35·31658	Cubic Feet.	35·34675	Cubic Feet.
		1·30802	„ Yards.	1·30914	„ Yards.
1 Cubic Inch	=	16·38618	Cub. Centimetres.	16·37207	Cub. Centimetres.
1 Cubic Foot	=	28·315311	„ Decimetres.	28·29087	„ Decimetres.
1 Cubic Yard	=	0·76451	„ Metre.	0·76385	„ Metre.
1 Litre	=	0·22024	Gallon.	0·22018	Gallon.
1 Gallon	=	4·54041	Litres.	4·54173	Litres.

The kilogram remains unchanged, being 15432·34874 grains or 2·204621 lbs. avoirdupois, 1,000 kilograms equal 0·984206 ton.

One pound avoirdupois equals 0·45359265 kilogram.

One ton equals 1016·04754 kilograms.

R. STRACHEY.

INDIA OFFICE,
The 5th December.

GOVERNMENT OF INDIA.

DEPARTMENT OF AGRICULTURE, REVENUE AND COMMERCE.

PUBLICATION OF OFFICIAL PRICE CURRENT ON A UNIFORM SYSTEM.

No. $\frac{1}{14-23}$.

Extract from the Proceedings of the Government of India in the Department of Agriculture, Revenue and Commerce, dated Fort William, the 18th January 1872.

[STATISTICS.]

READ the undermentioned correspondence regarding the proposed publication of official price-currents on a uniform system :—

Circular to Local Governments and Administrations and Bengal Chamber of Commerce, Nos. 281-90, dated the 17th January 1871.
Letter from Government of Bombay, No. 306, dated 28th January 1871.
„ Chief Commissioner, British Burmah, No. 62—2, dated 28th January 1871.
„ Chief Commissioner of the Central Provinces, No. 230—19, dated 7th February 1871.
„ Government of Punjab, No. 88, dated 20th February 1871.
„ Chief Commissioner of Oudh, No. 896, dated 20th February 1871.
„ Secretary, Bengal Chamber of Commerce, dated 25th February 1871.
„ Resident at Hyderabad, No. 94, dated 7th March 1871.
„ Government of Bengal, No. 884, dated 9th March 1871.
„ Chief Commissioner of Mysore, No. 6145—34G, dated 6th March 1871.
„ „ „ No. 68, dated 15th July 1871.
„ „ „ No. 2170—6, dated 1st August 1871.
„ Government of Madras, No. 1081, dated 17th June 1871.
„ „ „ No. 67, dated 15th July 1871.
„ „ „ No. 1332, dated 4th August 1871.
Endorsement from Financial Department, No. 3501, dated 13th September 1871.

RESOLUTION.

In considering the advantages of a uniform method of publishing the market prices of grains, the form of price current adopted in the *North-*

Western Provinces Gazette recommended itself to the Governor General in Council as the most complete and convenient that had been devised, and it was accordingly circulated to Local Governments and Administrations for their opinion on its fitness for universal adoption and any suggestions for its improvement which might present themselves. This form shewed the prices of the grains marginally noted by the number of sers of 80 tolahs purchasable for a rupee; and for purposes of comparison, it shewed, side by side with the current prices, those of the preceding week and of the corresponding week of the previous year.

(1.) Wheat.
(2.) Barley.
(3.) ~~Rice~~ - ..
(4.) Bajra.
(5.) Jowar.
(6.) Rice (common).
(7.) Gram.

2. The specimen form has been generally approved; but a few useful amendments have been proposed, and a revised form is now circulated for information and guidance.

The changes made are briefly the following:—

3. (*a*)—On the suggestion of the Financial Commissioner of the Punjab, the general heading has been altered to—"prices current of food grains;" the groups of columns belonging to the two kinds of rice have been brought into juxtaposition, and their headings slightly modified. In provinces where the entry of one sort of rice is considered sufficient, the columns for the best sort should be left blank.

(*b*)—To meet the circumstances of the south of India, columns have been added for ragi, cholum, cumboo and veragoo, and a group of columns for salt has been inserted, and will be obligatory for all provinces. The Board of Revenue, Madras, would also have columns for two sorts of "paddy." The Governor General in Council will not, however, prescribe this addition, but it will be open to any Government to add such entries should it see fit. The proposal to include the prices current of cotton and indigo does not commend itself to the Government of India. The returns under this head are doubtless valuable, but they should be published separately. As suggested by the Government of Bengal, a column for "remarks" has been added.

(*c*)—The standard ser, as defined in Act XXXI of 1871, has been substituted for the ser of 80 tolahs as the weight to which prices are referred. The Madras Government has urged the retention of the measure standard. But the main object of change being to obtain uniformity, the Governor General in Council considers the proposal inadmissible, and believes that there will be no real difficulty in exhibiting price according to the weight standard now prescribed. A careful formula of reduction should be prepared for each district, and for each species of food entered in the table. This being once done, the labor involved in the actual working out of the reductions is infinitesimal.

4. A few general instructions need to be added—

(1.)—The form, as its heading implies, should, if possible, be weekly. The Governor General in Council trusts that the obstacles to this course in the Madras Presidency and Mysore may not be found insuperable.

(2.)—The fractions of the ser should be shown decimally, but only to one place of decimals.

(3.)—The statement should not be encumbered with arrear statistics. If the return for any district is received too late for insertion, it should be omitted altogether. But the Governor General in Council hopes that such omissions will be rare.

(4.)—The statement for each province should be published in the local Gazette. But separate copies should be forwarded to the Government of India as soon as prepared.

(5.)—It will be open to each Local Government or Administration to insert additional triple groups of columns for other kinds of food which may appear to require special notice, or to omit the groups of columns pertaining to kinds of food which do not enter into the dietary of the people of the province.

5. In prescribing the accompanying form, the Governor General in Council expresses a hope that every effort will be made both by local Governments and Administrations, and by district officers and others charged with the preparation of the original tables, to make them a really valuable and accurate record of the current prices of food. To this end it is necessary, *first*, that the statistics in their original form should be exact; and *secondly*, that they should be correctly reduced. Special attention should be directed to both points.

ORDER.—Ordered, that a copy of the above Resolution, together with the prescribed form, be forwarded to the Local Governments and Administrations noted in the margin, for information and guidance, and that a copy also be published in the *Supplement to the Gazette of India*.

Madras.	Oudh.
Bombay.	Central Provinces.
Bengal.	British Burmah.
N. W. Provinces.	Mysore and Coorg.
Punjab.	Hyderabad.

(True Extract.)

(Sd.) J. GEOGHEGAN,

Offg. Secy. to the Govt. of India.

Prices Current of food grains in the several Districts of ______________ *during the week ending* ______________ 187 .

District No.	Districts.	QUANTITIES PER RUPEE BY THE STANDARD SER AS DEFINED IN ACT XXXI, 1871.																																				Remarks.
		Wheat.			Barley.			Rice, best sort.			Rice, common.			Bajra.			Jowar.			Gram.			Cholum.			Cumboo.			Veragoo.			Ragi.			Salt.			
		Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	Present week ending	Past week ending	Corresponding week of	

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

IRRIGATION OPERATIONS OF FUSL RUBBEE IN THE PUNJAB UP TO 30TH NOVEMBER 1871.

Canal Division.	Water Distributed During November. Depth in Canal of Regulating Gauge. Full Supply.	Actual throughout November.	Gross Consumption C. Ft. per Second. Estimated Full Supply.	Actual average throughout November.	Navigation Return Canal. Principal Items of Traffic. Up.	Down.	Land Irrigated (Approximate). Zillah.	Acres.	Rain-Fall. Average.	During Month.	Chief Crops (Approximate). Name.	Area in Acres.	Remarks.
Baree Doab Canal. 1st Division ...	4·90	3·47	3073·6	1023·88	Nil	Nil	Goordaspoor	9,590	Nil	Nil	Wheat ...	56,411	In consequence of there being no rain, the demand for water has been very great. The area irrigated shows an increase of 17,093 acres over the corresponding period of last year.
2d Divn. Main Branch, Lower	4·60	3·30		955·97			Umritsur ...	32,042	...	...	Barley ...	2,339	
2d Divn. Lahore Branch ...	3·30	3·10		707·78			Lahore ...	31,309	Nil	Nil	Grain ...	776	
											Mixed grains	5,654	
											Others ...	7,761	
Total B. D. Canal ...	...	...	3073·6	2687·63	...	...	...	72,941	Nil	Nil	...	7,294	
Corresponding period of last year ...	...	...	3073·6	2306·12	...	...	...	55,848	Nil	Nil	...	55,848	
Western Jumna Canals. Kurnaul Division ...	4·33	4·40	2546·00	456·28	Nil	50,157 Kurries, Bullies, Logs, &c., and 26,000 maunds of timber.	Umballa ...	316	0·05	Nil	Wheat ...	1,15,834	The increase of area irrigated over the period corresponding of last year, *viz.*, 26,221 acres approximately, is due to deficiency in rainfall.
Delhi " ...	4·40	4·45		827·03			Kurnaul ...	34,080	0·03	"	Barley ...	1,601	
Hansi " ...	8·80	8·8		1003·00			Delhi ...	31,894	Nil	"	Mixed grains	9,527	
" Bulla Head ...	8·40	8·8		295·00			Rohtuck ...	21,702	"	"	Others ...	2,786	
							Hissar ...	26,650	"	"			
							Jheend ...	15,106	"	"			
							Bikaneer ...	...	"	"			
Total W. J. Canals ...	...	...	2546·00	2581·31	...	50,157	...	1,29,748	Nil	Nil	...	1,29,748	
Corresponding period of last year ...	...	...	2546·00	2276·45	...	5,778	...	1,03,527	Nil	Nil	...	1,03,527	
Inundation Canals. Upper Sutlej Division ...	...	...	...	...	...	...	Lahore ...	3,000	Nil	Nil	Details not obtainable for want of establishment.	...	Deficiency in area irrigated on Inundation Canals is due to the early cessation of rains.
Lower Sutlej and Chenab	...	...	...	...	...	...	Montgomery	25,000	"	"		...	
Indus Canals ...	...	...	...	...	...	...	Mooltan ...	Nil	"	"		...	
							Dera Ghazee Khan ...	Nil	"	"			
Total Inundation Canals ...	...	...	...	...	...	...	...	28,000	...	...	...	28,000	
Corresponding period of last year ...	...	...	...	...	...	...	...	50,815	...	...	...	50,815	Comparing the whole area irrigated by perennial canals with that of the same date of last year, the increase is 43,314 acres approximately.
Delhi and Goorgaon Works ...	...	...	...	...	...	...	...	Nil	...	...	...	Nil	
Total Delhi and Goorgaon Works ...	...	...	...	...	...	...	...	Nil	...	...	...	Nil	
Corresponding period of last year ...	...	...	...	...	...	...	...	7,264	...	...	...	7,264	
PERENNIAL CANALS—GRAND TOTAL ...	...	...	...	...	...	50,157	...	2,02,689	...	...	...	2,02,689	
Ditto—Corresponding period of last year ...	...	...	...	...	...	57,778	...	1,59,375	...	...	...	1,59,375	

LAHORE, [illegible]

W. BROADFOOT, *Lieut., R.E.*,
Asst. Secy. to Govt., Punjab, P. W. Dept.

GOVERNMENT OF INDIA.

DEPARTMENT OF AGRICULTURE, REVENUE AND COMMERCE.

REPORTS ON THE STATE OF THE SEASON AND PROSPECTS OF THE CROPS.

GENERAL REMARKS.—If we trisect the Continent of India by east and west lines, running—one through the great central mountain ranges above Nagpore, and the other through the high table-land between the Godavery and the Kistna rivers,—we shall find each of the three divisions presenting a uniform and distinct phase in the subjoined returns.

In the northernmost, including the Punjab, N. W. Provinces, Oudh, and the greater part of Bengal, the weather has been damp or showery, and the spring-crops generally give fair promise, though in places, especially in Oudh and the N. W. Provinces, they have been injured by rain, hail or blight. To the extreme east the weather has been drier, and the prospects are uniformly good.

In the central division, which comprises a portion of the Central Provinces, the Berars, parts of Chota Nagpore and Cuttack, and the two northern districts of the Madras Presidency, there continues a marked, though not as yet severe, drought, felt most, apparently, in the districts of Ganjam and Vizagapatam.

In the southern division, that is, in Mysore and the remaining districts of the Madras Presidency, the weather has been dry, and the agricultural prospects are almost universally favourable.

No report has been received from Bombay and Rajpootana.

Presidency or Province.	District.	Date of District Report.	Rain-fall for fortnight preceding.	Date of report from Local Government or Administration.	State of agricultural prospects.	Remarks of Local Government or Administration.
MADRAS ...	Ganjam ..	January 31 ...	*Nil*	February 1 ...	Water-supply diminishing; well sinking in progress; market well supplied; grain imports large; prices high, but not rising; health good.	In the Northern Circars the effects of drought are more marked as the season advances. The markets are well supplied by imports. Relief works have been started in Ganjam. Elsewhere prospects are fairly good.
	Vizagapatam ...	" 31 ...	*Nil*	" ...	Drinking water diminishing; market well supplied; prices unchanged; health good.	
	Godavery ...	" 29 ...	*Nil*	" ...	Market well supplied; prices steady; health good.	
	Kistna ...	" 31 ...	*Nil*	" ...	Markets well supplied; prices steady; harvest fair; prospects fair.	
	Kurnool ...	" 31 ...	*Nil*	" ...	Markets well supplied; prices steady; crops fair; health good.	
	Negapatam ...	" 31 ...	1·25	" ...	Prices falling; prospects good.	
	Trichinopoly ...	" 31 ...	*Nil*	" ...	Prices steady; crops fair; harvest below average.	
	Calicut ...	" 30 ...	*Nil*	" ...	Prices low and steady; harvest fair; prospects good; health good.	

Presidency or Province.	District.	Date of District Report.	Rain-fall for fortnight preceding.	Date of report from Local Government or Administration.	State of agricultural prospects.	Remarks of Local Government or Administration.
BENGAL ...	Bhaugulpore Division—					
	Monghyr ...	... ...	1·1	January 31 ...	Weather seasonable; crops very good; rain very beneficial.	
	Bhaugulpore ...	... ...	·1			
	Sonthal Pergunnahs ...	.....	...	" ...	Light showers in Rajmehal and Godda; mustard being reaped; cold weather crops want more rain.	
	Patna Division—					
	Patna ...	... ...	1·3	" ...	Spring crops in Tirhoot, Gya and Chumparun are promising; in the other districts slightly injured by rain; dense fogs threaten to produce blight in them.	
	Sarun ...	... ...	1·5			
	Shahabad ...	... ...	1·6			
	Tirhoot ...	... ..	1·6			
	Chumparun ...	.....	Slight			
	Gya ...	.....	"			
	Rajshahye Division ...	.....	...	" ...	Light showers in Dinagepore and Malda; crops good everywhere.	
	Burdwan Division ...	.....	...	" ...	Weather fair and cool; prospects of winter crops favorable; in Bancoorah they are not doing well for want of rain.	
	Presidency Division ...	... ...	...	" ...	Weather seasonable; crops good, except in Nuddea, where they are not good.	
	Dacca Division ...	.....	*Nil*	" ...	Crops good.	
	Chittagong Division ...	.....	...	" ...	Weather fair; crops good; in Chittagong out-turn unusually good.	
	Cuttack Division ...	.....	*Nil*	" ...	Cold weather crops good, except in Pooree, where they are suffering from want of rain.	
	Chota Nagpore Division...	.....	...	" ...	Weather fine; crops good; in Maunbhoom, suffering from want of rain.	
	Assam Division ...	.....	...	" ...	Weather dry and cold; most crops gathered; out-turn good.	
	Cooch Behar Division ...	.....	...	" ...	Some rain at Julpigoree and Darjeeling; crops good; mostly reaped.	
N. W. PROVINCES ...	Allahabad ...	.....	1·	February 1 ...	Spring crops excellent.	
	Benares ...	.....	1·4	" ...	No serious damage; wheat and barley mildewed in some low-lying lands.	
	Meerut ...	.....	2·4	" ...	Prospects good; hail fell in Haupper Tehseel, and did much local damage.	
	Agra ...	.....	1·	" ...	Rape crop injured by fog and storms; wheat and gram not much damaged.	
	Bareilly ...	.....	1·1	" ...	No harm done as yet.	

Presidency or Province.	District.	Date of District Report.	Rain-fall for fortnight preceding.	Date of report from Local Government or Administration.	State of agricultural prospects.	Remarks of Local Government or Administration.
CENTRAL INDIA ...	Indore ...	January 31 ...	...	February 1 ...	No change since last report.	
	Gwalior ...	" ...	·32	"	.....	
	Baghelkund ...	" ...	1·3 at Sutna.	"	Crops generally promising; slight fall of hail on 24th.	
BRITISH BURMAH ...	.....	.....		February 1 ...	Rice crops reaped.	
MYSORE	Bangalore ...	February 1 ...	*Nil*	February 1 ...	Most of the crops have been harvested; their condition is favorable.	Agricultural prospects continue favorable.
	Mysore ...	January 30 ...	*Nil*	" ...	Most of the crops harvested; cotton, sugar-cane, &c., thriving.	
	Coorg ...	" 31 ...	*Nil*	" ...	Paddy being threshed; dry crops thriving. Bengal gram being reaped. Picking and despatching of coffee still continued.	

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PUNJAB ...	Delhi ...	...	0·6	February 1 ...	Weather cloudy; state of crops good.	Rain fell pretty generally during past fortnight; agricultural prospects good.
	Umballa ...	...	0·2	" ...	Agricultural prospects good.	
	Jullundhur ...	...	0·1	" ...	Rain highly beneficial to crops.	
	Lahore ...	...	0·2	" ...	State of crops good; hail on 29th, but no damage reported.	
	Mooltan ...	...	*Nil*	" ...	Crops as reported before.	
	Rawul Pindee ...	...	2·	" ...	Agricultural prospects excellent.	
	Peshawur ...	...	0·7	" ...	Agricultural prospects good.	
OUDH	.....	...	...	February 1 ...	The rain has proved unfavorable to the rubbee, and considerable damage is to be feared; gram and mustard crops have been injured in some places by insects.	
CENTRAL PROVINCES ...	Raipore ...	January 27 ...	*Nil*	February 1 ...	Rubbee crops have suffered in parts from want of rain. The late dews have done good, and prospects on the whole better than heretofore.	
	Belaspore ...	" ...	*Nil*	" ...	Crops progressing favorably, except *Alsi* somewhat injured by cloudy weather.	
	Sumbulpore ...	" ...	*Nil*	" ...	Prospects unchanged.	
	Jubbulpore ...	January 31 ...	27	" ...	Prospects of rubbee good throughout division. In Saugor pulse crop slightly suffered from excessive frost.	
	Hoshungabad ...	" ...	*Nil*	" ...	No rain, and prospects consequently not so good as before. Baitool same, not favorable. Less area sown. Blight on wheat has appeared.	
	Nursingpore ...	.....	...	" ...	Rubbee in two Tehseels particularly promising; in third not so good.	
	Nagpore ...	January 31 ...	*Nil*	" ...	Khurreef all cut. Rubbee crops have suffered from occasional cloudy weather; wheat not so promising as last year. Prices stationary. In Wurdah no rain. Prospects of crops moderately fair.	
HYDERABAD ASSIGNED DISTRICTS ...	East Berar ...	.....	...	February 1 ...	No improvement since last report. Rubbee crops still in backward condition. Partial failure in some parts of the division anticipated. Rain urgently required.	
	West Berar ...	January 30 ...	...	" ...	No improvement in the prospect of spring harvest. In many parts a total failure of crops.	Weather cloudy and warm; a change in the season now would do no good to the crops. It would improve the water-supply which is fast failing, and with the scarcity of fodder is causing serious distress and an increase of cattle sickness.

No. 7 of 1872.

SUPPLEMENT TO

The Gazette of India.

CALCUTTA, SATURDAY, FEBRUARY 17, 1872.

OFFICIAL PAPERS.

A SUPPLEMENT *to the* GAZETTE OF INDIA *will be published from time to time, containing such Official Papers and information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.*

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GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

EARNINGS AND EXPENSES OF INDIAN RAILWAYS DURING THE FIRST HALF OF 1871.

Detail of Locomotive and Carriage and Wagon Expenses.

Names of Railways.	General Superintendence.	Wages of Drivers and Firemen, Fuelling, cleaning Engines, &c.	Fuel.	Maintenance of Locomotive and Vehicle Stock.	Water, Oil, Stores, and cleaning Carriages and Wagons.	Other Items.	Total.	Deductions.	Net Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras ...	49,944	1,09,616	2,42,643	1,90,105	53,843	294	6,46,445	...	6,46,445
Great Southern of India ...	14,983	17,868	32,443	17,950	4,582	1,319	89,145	...	89,145
Carnatic ...	349	465	1,756	510	626	...	3,706	...	3,706
Great Indian Peninsula ...	1,23,899	4,99,386	10,67,335	9,30,901	2,61,288	3,873	28,86,682	10,169*	28,76,513
Bombay, Baroda, and Central India ...	56,878	93,094	2,53,435	2,46,292	46,510	717	6,96,926	...	6,96,926
East Indian—Main Line ...	2,48,723	6,49,388	3,75,194	7,22,790	2,30,875	8,772	22,35,742	5,664†	22,30,078
" " Jubbulpore Line ...	22,922	54,896	1,31,682	68,652	21,797	1,854	3,01,803	2,130‡	2,99,673
Eastern Bengal ...	25,451	48,779	67,300	50,515	21,040	35	2,13,120	...	2,13,120
Calcutta and South-Eastern (State) ...	1,482	2,918	6,815	3,685	2,217	...	17,117	...	17,117
Oudh and Rohilkhund ...	2,291	8,587	9,280	5,128	2,702	318	28,306	...	28,306
Punjab and Delhi ...	47,939	1,19,983	2,33,636	1,48,224	40,520	25,727	6,16,029	7,011§	6,09,018
Sindh ...	13,248	20,042	43,155	80,706	11,080	1,636	1,69,867	...	1,69,867
Total for all Railways ...	6,08,109	16,25,022	24,64,674	24,65,458	6,97,080	44,545	79,04,888	24,974	78,79,914

* Chargeable to the Khamgaon and Oomraotee Lines.
† Credited to this Department for hire of Engines, &c.
‡ Chargeable to Construction Account.
§ Chargeable to Fire Insurance Fund.

Detail of Traffic Expenses.

Names of Railways.	General superintendence.	Station Staff.	Train Staff.	Charges for delivery and collection of goods.	Other items.	Total.	Deductions.	Net Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras	42,423	1,07,844	26,312	...	51,538	2,28,117	...	2,28,117
Great Southern of India	3,981	14,404	2,768	...	9,894	31,047	...	31,047
Carnatic	498	819	92	...	320	1,729	...	1,729
Great Indian Peninsula	96,307	3,55,697	2,10,641	2,78,780	2,75,888	12,17,313	3,341*	12,13,972
Bombay, Baroda, and Central India ...	36,776	1,22,456	16,619	1,09,328	81,728	3,66,907	...	3,66,907
East Indian—Main Line	1,77,474	4,87,561	1,79,867	2,29,757	1,91,153	12,65,812	...	12,65,812
„ „ Jubbulpore Line ...	4,058	23,857	14,783	1,606	23,964	68,268	...	68,268
Eastern Bengal	21,262	68,917	15,467	15,401	32,882	1,53,929	...	1,53,929
Calcutta and South-Eastern (State) ...	2,641	2,103	1,731	...	696	7,171	...	7,171
Oudh and Rohilkhund	3,874	12,314	1,891	...	1,958	20,037	...	20,037
Punjab and Delhi	46,428	1,26,699	31,729	...	86,633	2,91,489	...	2,91,489
Sindh	7,489	21,536	5,388	...	10,389	44,802	...	44,802
Total for all Railways ...	4,43,211	13,44,207	5,07,288	6,34,872	7,67,043	36,96,621	3,341	36,93,280

* Chargeable to the Khamgaon and Oomraotee Lines.

Detail of General Charges.

Names of Railways.	Home Expenditure.	Indian Management.	Police.	Electric Telegraph.	Other Items.	Total.	Remarks.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Madras	6,130	38,241	8,162	27,511	1,468	81,512	
Great Southern of India ...	7,970	12,905	...	3,674	37	24,586	
Carnatic	2,550	3,099	...	18	...	5,667	
Great Indian Peninsula... ...	18,774	1,39,970	87,991	1,12,401	3,549	3,62,685	
Bombay, Baroda, and Central India ...	20,496	99,161	34,610	25,877	3,575	1,83,719	
East Indian—Main Line ...	63,157	3,28,290	80,579	1,68,010	8,653	6,48,689	
" " Jubbulpore Line... ...	6,341	24,115	8,520	22,451	1,931	63,358	
Eastern Bengal	12,635	35,846	12,675	16,232	5,005	82,393	
Calcutta and South-Eastern (State) ...	...	2,347	299	1,310	215	4,171	
Oudh and Rohilkhund ...	4,236	7,518	990	3,425	357	16,526	
Punjab and Delhi ... / Sindh	38,947	2,50,566	23,289	41,588	3,634	3,58,024	
Total for all Railways ...	1,81,236	9,42,058	2,57,115	4,22,497	28,424	18,31,330	

Comparative Statements showing the Earnings and Working Expenses of the different Railways for the half-year ending 30th June 1871.

GENERAL RESULTS.

NAMES OF RAILWAY.	Open Mileage.	Traffic Train Mileage.	Earnings.	Expenses.	Net Earnings.
			Rs.	Rs.	Rs.
Madras ...	831½	878,496	27,86,421	15,07,817	12,78,604
Great Southern of India ...	168	121,801	3,69,829	1,98,937	1,70,892
Carnatic ...	19	14,155	19,779	13,400	6,379
Great Indian Peninsula ...	1,273½	2,420,452	1,18,38,064	66,24,902	52,13,162
Bombay, Baroda and Central India	326¾	453,462	33,14,986	16,96,534	16,18,452
East Indian—Main Line ...	1,280	2,523,543	1,34,96,267	55,07,168	79,89,099
,, ,, Jubbulpore Line ...	223	241,321	7,68,393	5,55,657	2,12,736
Eastern Bengal ...	156½	237,866	13,00,020	7,36,690	5,63,330
Calcutta and South-Eastern (State)* ...	28	20,044	37,905	38,964	—1,059
Oudh and Rohilkhund ...	42	25,797	1,44,527	93,106	51,421
Junjab and Delhi ...	554¼	464,648	25,47,541	22,79,491	2,68,050
Sindh ...	109¾	74,628			
TOTAL FOR ALL RAILWAYS ...	5,012¼	7,476,213	3,66,23,732	1,92,52,666	1,73,71,066

* The figures are for the half-year ending 30th September 1871.

Names of Railways.	COACHING TRAFFIC.									
	Passengers.									
	1st Class.		2nd Class.		3rd Class.		4th Class.		Total.	
	Number.	Receipts.	Number.	Receipts.	Number.	Receipts.	Number.	Receipts.	Number.	Receipts.
		Rs.		Rs.		Rs.		Rs.		Rs.
Madras ...	5,314	65,594	55,756	87,054	921,696	7,20,119	123,676	48,735	1,106,442	9,21,5[illegible]
Great Southern of India ...	651	3,636	4,297	5,522	394,917	1,88,715	...	...	3,99,667	1,97,87[illegible]
Carnatic ...	378	332	3,753	2,057	43,234	15,723	...	...	47,365	18,11[illegible]
Great Indian Peninsula ...	14,466	1,65,835	78,076	2,35,186	725,652	10,40,039	974,974	8,42,012	1,793,168	22,83,07[illegible]
Bombay, Baroda, and Central India ...	6,772	26,579	55,713	70,081	1,247,149	9,05,676	...	...	1,309,634	10,02,33[illegible]
East Indian—Main Line ...	16,356	1,86,373	72,319	1,99,983	2,426,615	28,84,753	343,112	1,47,098	2,858,402	34,18,20[illegible]
" " Jubbulpore Line	1,407	29,920	2,529	33,485	111,684	2,57,561	2,290	8,423	117,910	3,29,38[illegible]
Eastern Bengal ...	17,815	21,856	25,253	14,856	150,504	8 5 9,31	566,225	3,11,673	759,797	a4,41,94[illegible]
Calcutta and South-Eastern (State) ...	1,862b	1,234	...	...	c151,788	21,089	...	...	153,650	d22,47[illegible]
Oudh and Rohilkhund ...	1,255	4,919	2,982	5,427	...	...	173,793	62,169	178,030	72,51[illegible]
Punjab and Delhi ...	5,603	41,747	13,549	49,539	5,083	10,574	969,123	8,27,217	993,358	9,29,07[illegible]
Sindh ...	697	2,418	3,374	6,043	39,196	48,353	...	...	43,267	56,81[illegible]
Total for all Railways ...	72,576	5,50,443	317,601	7,09,233	6,217,320	61,81,917	3,153,193	22,47,327	9,760,690	96,93,31[illegible]

(a). Includes Rs. 4,240 from Excess Fares.
(b). Called
(c). Called
(d). Includes Rs. 155 from Excess Fares.
* On account of irrecoverable
† Goods
‡ Refunded to Government for

		Goods Traffic.										
	Total.	General Merchandise, including Military Stores.	Railway Materials for Construction.	Minerals.	Miscellaneous.	Total.	Electric Telegraph.	Steam boat.	Sundries.	Grand Total.	Deductions.	Net Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
045	10,70,547	14,99,752	1,05,801	...	13,703	16,19,256	10,310	...	86,308	27,86,421	...	27,86,421
353	2,13,226	1,45,259	238	...	427	1,45,924	1,893	...	8,786	3,69,829	...	3,69,829
397	18,509	1,138	8	...	8	1,154	36	...	80	19,779	...	19,779
413	25,60,485	87,85,622	2,54,388	...	44,815	90,84,825	26,327	...	1,66,427	1,18,38,064	...	1,18,38,064
152	10,93,488	19,58,288	1,42,683	2,977	55,191	21,59,139	11,412	...	51,825	33,15,864	878*	33,14,986
643	38,02,850	86,48,157	...	7,93,592	16,910	94,58,659	23,977	63,944	3,54,550	1,37,03,980	2,07,713†	1,34,96,267
700	3,81,089	4,34,116	...	532	942	4,35,590	2,161	...	20,411	8,39,251	70,858‡	7,68,393
011	4,80,951	6,08,099	9,281	33,499	5,456	6,56,335	1,938	1,31,523	29,273	13,00,020	...	13,00,020
950	27,428	8,305	...	46	169	8,520	52	...	1,905	37,905	...	37,905
173	82,688	28,085	27,035	4	260	55,384	387	...	6,068	1,44,527	...	1,44,527
757	10,32,834	7,30,358	12,761	...	3,815	7,46,934	6,001	3,24,852	61,409	25,47,541	...	25,47,541
82	62,496	3,12,127	...	...	275	3,12,402	613					
76	1,08,26,591	2,31,59,306	5,52,195	8,30,650	1,41,971	2,46,84,122	85,107	5,20,319	7,87,042	3,69,03,181	2,79,449	3,66,23,732

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Summary of Expenses.

Names of Railways.	Maintenance of Way Works and Stations.	Locomotive and Carriage and Wagon Expenses.	Traffic Expenses.	General Charges.	Steam Boat Service.	Special and Miscellaneous Expenditure.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras	4,94,709	6,46,445	2 28,117	81,512	...	57,034	15,07,817
Great Southern of India	45,444	89,145	31,047	24,586	...	8,715	1,98,937
Carnatic	2,298	3,706	1,729	5,667	...	...	13,400
Great Indian Peninsula	11,02,655	28,76,513	12,13,972	3,62,685	...	10,69,077	66,24,902
Bombay, Baroda, and Central India ...	3,90,648	6,96,926	3,66,907	1,83,719	...	58,334	16,96,534
East Indian—Main Line	10,66,586	22,30,078	12,65,812	6,48,689	57,126	2,38,877	55,07,168
„ „ Jubbulpore Line ...	1,17,057	2,99,673	68,268	63,358	...	7,301	5,55,657
Eastern Bengal	1,00,083	2,13,120	1,53,929	82,393	1,53,802	33,363	7,36,690
Calcutta and South-Eastern (State) ...	9,755	17,117	7,171	4,171	...	750	38,964
Oudh and Rohilkhund	24,466	28,306	20,037	16,526	...	3,771	93,106
Punjab and Delhi	2,53,936	6,09,018	2,91,489	3,58,024	2,85,869	1,03,088	22,79,491
Sindh	1,63,398	1,69,867	44,802				
Total for all Railways ...	37,71,035	78,79,914	36,93,280	18,31,330	4,96,797	15,80,310	1,92,52,666

Detail of Expenses for Maintenance of Way, Works, and Stations.

Names of Railways.	General Superintendence.	Maintenance and Renewal of Permanent Way.	Other items.	Total.	Deductions.	Net Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras	52,804	2,32,412	2,09,493	4,94,709	...	4,94,709
Great Southern of India	10,354	29,236	5,854	45,444	...	45,444
Carnatic	349	1,949	...	2,298	...	2,298
Great Indian Peninsula	1,68,256	7,36,209	6,25,651	15,30,116	4,27,461*	11,02,655
Bombay, Baroda, and Central India	78,406	2,11,797	1,00,445	3,90,648	...	3,90,648
East Indian—Main Line	1,96,417	4,14,262†	4,55,907	10,66,586	...	10,66,586
" " Jubbulpore Line	47,961	57,324‡	11,772	1,17,057	...	1,17,057
Eastern Bengal	24,059	49,664	26,360	1,00,083	...	1,00,083
Calcutta and South-Eastern (State)	2,118	6,468	1,169	9,755	...	9,755
Oudh and Rohilkhund	3,408	15,201	5,857	24,466	...	24,466
Punjab and Delhi	95,143	89,249	69,544	2,53,936	...	2,53,936
Sindh	18,634	47,318	97,446	1,63,398	...	1,63,398
Total for all Railways ...	6,97,909	18,91,089	16,09,498	41,98,496	4,27,461	37,71,035

* Chargeable to Permanent Way Renewal Fund.
† Includes cost of repairs of Bridges, &c., and of Ballast Train establishments.
‡ Includes cost of repairs of Bridges, &c.

GOVERNMENT OF INDIA.

DEPARTMENT OF AGRICULTURE, REVENUE AND COMMERCE.

REPORTS ON THE STATE OF THE SEASON AND PROSPECTS OF THE CROPS.

GENERAL REMARKS.—Rain has fallen in the Punjab generally with the exception of Mooltan during the fortnight, and the crops are looking well. In Oudh, slight rain, with attendant fogs, has proved injurious to the crops, and blight has shown itself. The wheat crops appear to have suffered most. The rain has also extended over the North-Western Provinces and the greater portion of Bengal, but, for the most part, without any harmful effects. The crops are said to be promising throughout. In Chittagong the weather has been cool and dry, but the prospects of the crops are no less favorable. In Sindh frost has done damage in places, but in the rest of the northern portion of the Bombay Presidency the crops are good, especially the cotton; the reports from Khandeish and Poona are unfavorable. There has been little or no rain in the Central Provinces; in the southern divisions the rubbee harvest is expected to be considerably below the average. In the Berars there has been no rain. The want of water is more and more severely felt, and, where the crops are fit to reap, the out-turn is insignificant. The northernmost districts of the Madras Presidency are similarly suffering. Disease has made its appearance among the cattle, and measures of relief are in operation. The influence of the drought, however, is confined to the tracts north of the Kistna River, and throughout the southern part of the Peninsula the agricultural prospects are satisfactory.

No report has been received from Rajpootana.

Presidency or Province.	District.	Date of District Report.	Rain-fall for fortnight preceding.	Date of report from Local Government or Administration.	State of agricultural prospects.	Remarks of Local Government or Administration.
MADRAS ...	Ganjam ..	February 14 ...	*Nil*	February 15 ...	Water supply short; prices slightly rising at Berhampore; health good; cattle disease exists.	Government is satisfied with the condition of things excepting in Northern Coast Districts, where relief measures are in operation.
	Vizagapatam ...	" ...	*Nil*	" ...	Water supply short; prices slightly rising; market well supplied; pasture scanty; murrain exists.	
	Godavery ...	" 12 ...	*Nil*	" ..	Prices moderate and steady; market well supplied; health good.	
	Kistna ...	" 14 ...	*Nil*	" ...	Water supply short in uplands; prices slightly fallen; markets well supplied; harvest out-turn below average; prospects fairly good.	
	Kurnool ...	" ...	*Nil*	" ...	Prices steady; markets well supplied; harvest satisfactory; pasture sufficient; health generally good.	
	Negapatam ...	" ...	...	" ...	Prices steady; prospects good.	
	Trichinopoly ...	" ...	...	" ...	Prices steady; harvest satisfactory; crops in good order.	
	Calicut ...	" 13 ...	0·7	" ...	Prices low and steady; condition and prospects satisfactory.	

BOMBAY	Sind	.....	*Nil*	February 15	Rubbee in some places severely damaged by frost; districts healthy; prices as before; cotton-picking finished.
	Guzerat	.....	...	"	Winter crops good; cotton crops heavy; prospects encouraging.
	Broach	.....	...	"	Late crops generally good.
	Surat	.....	...	"	Cotton crops generally gathered; much fodder brought from hills.
	Khandeish	.....	...	"	Harvest unfavorable; cotton prospects not satisfactory.
	Deccan	.....	...	"	Picking of American cotton well advanced; if present advance be maintained, there will be a very busy cotton season.
	Poona	.....	...	"	
	Ahmednuggur	.....	...	"	
	Southern Maratha Country	.....	*Nil*	"	
	Dharwar	.....			
BENGAL	Bhaugulpore Division	.....	0·4	February 14	Prospects of crops very good.
	Sonthal Pergunnahs	.....	...	"	Rain-fall everywhere; heavy shower at Godda on the 5th; rain beneficial to the crops on the ground.
	Rajshahye Division	.....	...	"	Heavy rains at Rajshahye, Moorshedabad, and Pubna; spring crops promise well.
	Burdwan Division	.....	...	"	Plenty of rain at Hooghly; in less quantity everywhere else; state of crops satisfactory.
	Presidency Division	.....	2·	"	Spring crops good.
	Dacca Division	.....	0·6	"	The rain has done much good to all standing crops, except to a little ripe mustard-seed; ryots are very sanguine.
	Chittagong Division	.....	...	"	Weather cool and dry; crops generally favorable.
	Cuttack Division	.....	0·4	"	Crops satisfactory.
	Chota Nagpore Division—				
	Lohardugga	.....	0·9	"	Crops generally improved by the rain.
	Maunbhoom	.....	0·8		
	Hazareebaugh	.....	0·5		
	Assam Division	.....	...	"	Plenty of rain in Nowgong; crops on the ground promising well.
	Cooch Behar Division—				
	Cooch Behar	...	1·2	"	Crops good.
	Darjeeling	.....	0·1		
N. W. PROVINCES	Meerut	.....	0·7	February 15	Prospects good; late heavy rain damaged oil-seed crops, but not wheat or barley.
	Bareilly	.....	2·	"	Prospects fair; crops recovering from effects of damp weather.
	Allahabad	.....	...	"	No appreciable rain-fall; spring crops excellent; misty weather, which at first threatened blight, having disappeared.
	Benares	.....	0·4	"	Prospects good; damage done by late rain insignificant.

Presidency or Province.	District.	Date of District Report.	Rain-fall for fortnight preceding.	Date of report from Local Government or Administration.	State of agricultural prospects.	Remarks of Local Government or Administration.
PUNJAB ...	Jullundhur ...	.....	0·6	Fortnight ending February 14	Highly beneficial to crops	The prospects of the harvest are generally favorable.
	Lahore ...	.....	0·2	.....	State of crops good, but large area in the centre of the Doab still unsown.	
	Mooltan ...	.....	*Nil*	.....	Rain wanted; gram and wheat crops in Serai Sidhoo damaged by insects.	
	Rawul Pindee ...	.....	2·0	.....	Agricultural prospects good.	
	Peshawur ...	.....	1·3	.....	Ditto ditto ditto.	
	Delhi ...	.....	0·8	.....	Crops doing very well; weather variable.	
	Umballa ...	.....	1·4	.....	Agricultural prospects good.	
OUDE ...	Lucknow ...	February 14 ...	0·5	February 15 ...	The fall of rain and fogs has proved injurious to the crops; wheat and mustard injured by insects "Gerivi" and "Maho;" gram and Urhur are going on well.	
	Fyzabad ...	" ...	0·9	" ...		
CENTRAL PROVINCES ...	Raepore ...	February 10 ...	*Nil*	February 15 ...	Weather cloudy; wheat being in ear, rain would do no harm; pulse crops reaped.	
	Belaspore ...	" ...	*Nil*	" ...	Clouds have somewhat injured gram and oil-seed crops.	
	Sumbulpore ...	" ...	*Nil*	" ...	No change.	
	Jubbulpore ...	" 14 ...	0·14	" ...	Prospects of rubbee crops good in all districts except Saugor, where wheat has been attacked in some parts by "Khyra."	
	Nagpore ...	" ...	*Nil*	" ...	Khurreef reaped and gathered, wheat being cut; rubbee crops on the whole inferior; prices steady.	
	Wurdha ...	" ...	*Nil*	" ...	Crops light.	
	Nimar ...	" ...	*Nil*	" ...	Khurreef below average; rubbee not favorable; wheat and gram being harvested.	
	Nursingpore ...	" ...	0·2	" ...	Crops promising favorably, and good average out-turn expected.	
HYDERABAD ASSIGNED DISTRICTS	East Berar ...	February 15 ...	...	.....	Prospects unchanged; partial failure of rubbee crops in some parts of the division; rain required for wells and tanks.	
	West Berar ...	" 14 ...	...	.....	Spring crops are being harvested, and, where fit to be reaped, the out-turn has been from 2 to 4 annas; want of water is increasing.	
BRITISH BURMAH ...	.....	...	*Nil*	February 15 ...	Crops all gathered, and good generally.	

MYSORE ...	Bangalore ...	February 15 ...	*Nil*	February 15 ...	All crops harvested excepting sugarcane; this out-turn is good, though less than last year; paddy being sown under tanks having water sufficient to last during the hot weather ... ... } Prices of grain partially rising.
	Mysore ...	" 13 ...	0·67	" ...	Sugarcane, cotton, Bengal gram thriving ...
	Coorg ...	" 15 ...	*Nil*	" ...	Prospects favorable ... ...
CENTRAL INDIA ...	Indore ...	February 14 ...	...	February 16 ...	No change from last report.
	Baghelcund, Sutna ...	... ...	1·8	"	
	Nagode ...	.....	1·1	" ...	Hailstorm on the 2nd February; thunderstorm on the 4th; crops have not suffered, and general prospects remain good.

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The Gazette of India,

EXTRAORDINARY.

Published by Authority.

CALCUTTA, TUESDAY, FEBRUARY 20, 1872.

HOME DEPARTMENT.

NOTIFICATION.

PUBLIC.

Fort William, the 20th February 1872.

No. 825.

THE ACTING GOVERNOR GENERAL IN COUNCIL notifies that the remains of HIS EXCELLENCY THE EARL OF MAYO, late Viceroy and Governor General of India, will be removed from Government House and conveyed on board Her Majesty's Ship *Daphne* early on the morning of Wednesday, the 21st February.

The Ceremonial will be conducted as follows:—

Twenty-one minute guns, commencing at sun-rise, will be fired from the batteries of Fort William.

The Coffin having been placed on a gun-carriage at the foot of the Grand Staircase of Government House, a Funeral Service will be performed at 7 A. M. by the Right Reverend the Lord Bishop of Calcutta.

Places will be allotted, without regard to precedence of rank, to members of the Christian community of Calcutta on the steps of the Grand Staircase. The number of these will of necessity be limited by considerations of space. The platform in the centre of the Staircase will be reserved for the Bishop of Calcutta, the Officiating Clergy, the Choir, and the Christian members of the Procession which will accompany the Coffin to the place of embarkation. All other persons desirous of witnessing the ceremony will be provided with places on the north-east and north-west sides of the Government House enclosure. Places should be occupied by 6-30 A. M.

At the conclusion of the Funeral Service, the Public Ceremonial will be considered to have closed. The congregation on the Grand Staircase, as well

as those who have places in the enclosure, will, however, retain their places while the Coffin, under a Military and Naval Escort, and accompanied by the Procession detailed below, is conveyed through the North Entrance of Government House towards the place of embarkation in the following order :—

Officers of the Quarter Master General's Department.

A Detachment of 1st Bengal Cavalry (mounted).

The Escort, consisting of the Calcutta Volunteer Rifle Corps, with arms reversed, with the Bands of Her Majesty's 14th and 107th Regiments,—the Bands playing "The Dead March in Saul."

The Viceroy's Band.

The Body Guard (dismounted).

The Viceroy's Chaplain. The Lord Bishop. The Domestic Chaplain.

Col. G. Delane, Comdg. Body-Guard.

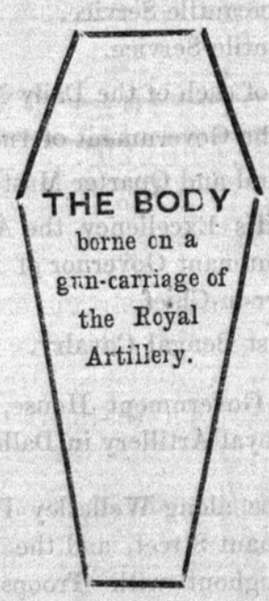
Lieut. T. Deane.

Capt. R. H. Grant, A-D-C.

Capt. F. H. Gregory, A-D-C.

Subadar Major and Sirdar Bahadoor Sewbuccus Awusty, A-D-C.

Dr. C. Barnett.



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The Earl of Donoughmore.

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Chief Mourners.

The Hon'ble Terence Bourke.

The Hon'ble R. Bourke. Major the Hon'ble E. R. Bourke.

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On the Coffin leaving Government House, twenty-one minute guns will be fired from a Battery of Royal Artillery in Dalhousie Square.

The route—which will be along Wellesley Place, the south-west angle of Dalhousie Square, Coilah Ghaut Street, and the Strand, to the Custom House Jetty—will be lined throughout with Troops under the orders of the Brigadier General Commanding the Presidency District.

On reaching the entrance of the Jetty enclosure, the horses will be removed from the gun-carriage, which will then be drawn along the Jetty by a detachment of Sailors. The escort will remain outside the enclosure,—the Procession accompanying the Coffin to the river side. When the Coffin has been received on board, the Escort and Troops will be marched off under the orders of the Brigadier General Commanding.

Her Majesty's Ship *Daphne* will then steam down the river, receiving a royal salute from the batteries of Fort William on passing Fort Point.

That evening, forty-nine minute guns will be fired from the Fort; the last gun to be fired, and the flag to be dropped, as the sun sets.

It is considered desirable to explain that the route selected for the line of march on Wednesday, the 21st, is so short, and the space at the point of

embarkation so restricted, that it has been found necessary to very greatly reduce the numbers of those joining the Procession.

Admission to the ceremony will be by tickets. Those for the Procession and Grand Staircase will be distributed by the Foreign Office on application from 2 to 6 P. M. to-day; those for the area of the north-east and north-west sides of Government House, by the Bengal Secretariat.

Officers entitled to wear uniform will appear in full dress, with the mourning ordered to be worn on the occasion of the reception of the remains of the late Viceroy.

European and Native gentlemen not entitled to wear uniform are requested to appear in mourning, according to their respective customs.

By Order,

E. C. BAYLEY,

Secy. to the Govt. of India.

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CALCUTTA, TUESDAY, FEBRUARY 20, 1872.

HOME DEPARTMENT.

NOTIFICATION.

PUBLIC.

Fort William, the 20th February 1872.

No. 838.

THE ACTING GOVERNOR GENERAL IN COUNCIL directs that every mark of distinction and respect shall continue to be paid to Her Excellency the Countess of Mayo while Her Excellency may remain in India. The requisite Guards and Escorts will be furnished, and Public Officers are charged with the duty of fulfilling the anxious desire of the Government of India that nothing shall be omitted which can tend in any way to promote Her Excellency's dignity and convenience.

E. C. BAYLEY,
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HOME DEPARTMENT.

NOTIFICATION.

PUBLIC.

Fort William, the 20th February 1872.

No. 826.

THE ACTING GOVERNOR GENERAL IN COUNCIL directs the publication, for general information, of the following message which he has received from the Secretary of State for India on the part of Her Most Gracious Majesty the QUEEN :—

"I am commanded by the QUEEN to forward the following message for publication in India :—

"'The QUEEN has been deeply affected by the intelligence of the deplorable calamity which has so suddenly deprived all classes of her subjects in India of the able, vigilant, and impartial rule of one who so faithfully represented her as Viceroy of her Eastern Empire. Her Majesty feels that she has indeed lost a devoted servant and a loyal subject in whom she reposed the fullest confidence. To LADY MAYO the loss must be irreparable, and the QUEEN heartily sympathises with her under the terrible blow.' "

By Order,

E. C. BAYLEY,

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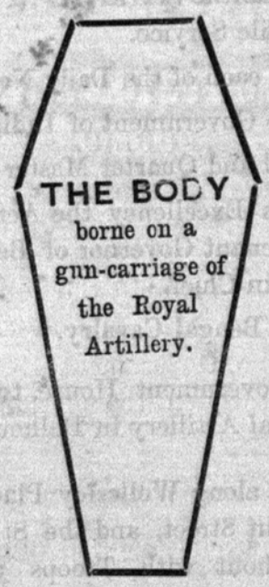

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By Order,

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Secy. to the Govt. of India.

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CALCUTTA, THURSDAY, FEBRUARY 22, 1872.

HOME DEPARTMENT.

NOTIFICATION.

PUBLIC.

Fort William, the 22nd February 1872.

No. 882.

His Excellency the Right Hon'ble Baron Napier of Merchistoun, K.T., is expected to arrive in Calcutta in the Steam Ship *Patna* on Friday, the 23rd, to assume the office of Viceroy and Governor General of India.

The Secretary to the Government of India in the Home Department, the Military Secretary to the Acting Governor General, and an Aide-de-Camp to the Acting Governor General will proceed down the river in the *Sir William Peel* to wait upon The Right Hon'ble Baron Napier of Merchistoun.

When the *Patna* passes Atcheepore five guns will be fired from Fort William.

The *Patna* will anchor near the Dockyard.

At 4½ o'clock P. M. the Secretaries to the Government of India will wait upon The Right Hon'ble Baron Napier of Merchistoun on board the *Patna*.

His Excellency will be conveyed from the *Patna* to Chandpal Ghât in the Yacht *Sonamúkhí*.

His Excellency will land at Chandpal Ghât at 5½ P. M., or about that time. Upon landing, His Excellency will be received by the Secretary to the Government of Bengal, the Commissioner of Police, the Master Attendant, and the Sheriff of Calcutta. When His Excellency lands, a salute of 21 guns will be fired from the ramparts of Fort William.

The Right Hon'ble Baron Napier of Merchistoun will then proceed to Government House, where His Excellency will be received at the foot of the Great Entrance by the Lieutenant Governor of Bengal, and at the head of the steps by the Acting Governor General and the Members of the Governor General's Council.

All the Civil Officers of the Government and the whole of the Garrison and General Staff, as well as other Officers on duty at the Presidency, are requested to be in attendance at Government House at 5 P. M., upon this occasion, in full uniform or evening dress.

When His Excellency the Right Hon'ble Baron Napier of Merchistoun shall have taken his seat as Viceroy and Governor General in Council, a further salute of 21 guns will be fired from the ramparts of Fort William.

No. 883.

The following Garrison Order is published for general information :—

"*Presidency District Order by Brigadier General* W. L. INGALL, C. B., *Commanding Presidency District.*

"*Fort William, the 22nd February* 1872.

No. 113.

"Under instructions from Army Head Quarters, the whole of the Troops in Garrison (1st Battalion 14th Foot, 107th Regiment, 8th and 13th Native Infantry, and Detachment 10th Native Infantry) will parade in review order between Chandpal Ghât and Government House at 5 P. M. to-morrow, the 23rd instant, for the reception of HIS EXCELLENCY THE RIGHT HON'BLE FRANCIS BARON NAPIER OF MERCHISTOUN, K.T.

"A wing of the 1-14th Foot, with Band and Colors, under command of a Field Officer, will be drawn up facing the river at Chandpal Ghât to receive His Excellency on landing.

"The road running from Chandpal Ghât in front of the new High Court buildings to the north-west gate of Government House will be lined with Troops in single ranks, as follows,—the 8th Native Infantry with its flanks resting on the Ghât, the extension continued by the 13th Native Infantry, and concluded by the Detachment 10th Native Infantry.

"A wing of the 107th Regiment, with Band and Colors, under command of a Field Officer, will be drawn up facing the Grand Staircase of Government House to receive His Excellency on arrival. The remainder of the 1-14th Foot and 107th Regiment will form a street from the north-west gate to the Grand Staircase.

"A salute of 21 guns will be fired from the ramparts of Fort William as His Excellency lands at Chandpal Ghât, and a further salute of 21 guns will be fired when HIS EXCELLENCY THE RIGHT HON'BLE BARON NAPIER OF MERCHISTOUN shall have taken his seat as Viceroy and Governor General in Council.

By Order,

A. J. COLVIN BIRCH, *Captain,*

Brigade Major."

By Order of the Acting Governor General in Council.

E. C. BAYLEY,

Secy. to the Govt. of India.

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CALCUTTA, TUESDAY, FEBRUARY 20, 1872.

HOME DEPARTMENT.

NOTIFICATION.

PUBLIC.

Fort William, the 20th February 1872.

No. 853.

THE ACTING GOVERNOR GENERAL IN COUNCIL having ascertained that the Lords of Her Majesty's Most Hon'ble Privy Council have ordered that Prayers and Thanksgivings should be offered up to ALMIGHTY GOD for the recovery of HIS ROYAL HIGHNESS THE PRINCE OF WALES upon Tuesday next, the 27th instant, deems it right and proper to set apart the same day as one of Thanksgiving by all faithful subjects of HER MOST GRACIOUS MAJESTY THE QUEEN in India. THE ACTING GOVERNOR GENERAL IN COUNCIL accordingly invites all Her Majesty's subjects to offer up special Public Prayers and Thanksgivings upon the 27th instant in the Churches, Congregations, and Assemblies, for the recovery of HIS ROYAL HIGHNESS THE PRINCE OF WALES.

THE ACTING GOVERNOR GENERAL IN COUNCIL further directs that the General Treasury and all Public Offices throughout British India shall be closed on the same day.

By Order,

E. C. BAYLEY,

Secy. to the Govt. of India.

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CALCUTTA, SATURDAY, FEBRUARY 24, 1872.

HOME DEPARTMENT.

NOTIFICATION.

PUBLIC.

Fort William, the 24th February 1872.

No. 958.

His Excellency the Viceroy and Governor General will attend Divine Service at the Cathedral at half past 10 A. M., on Tuesday next, the 27th instant, the day appointed for the General Thanksgiving for the recovery of His Royal Highness the Prince of Wales from dangerous illness.

Members of the Services, Civil, Military, and Naval are invited to accompany His Excellency on this occasion.

A certain number of seats will be provided, for which application should be made to the Senior Chaplain, the Revd. B. T. Atlay, in the Cathedral.

By Order of the Governor General in Council.

E. C. BAYLEY,
Secy. to the Govt. of India.

Printed and Published for the Govt. of India *at the Office of* Supdt. of Govt. Printing, 8, *Hastings Street, Calcutta.*

No. 8 of 1872.

SUPPLEMENT TO

The Gazette of India.

CALCUTTA, SATURDAY, FEBRUARY 24, 1872.

OFFICIAL PAPERS.

A SUPPLEMENT *to the* GAZETTE OF INDIA *will be published from time to time, containing such Official Papers an information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known*

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT *separately on a payment of six Rupees per annum if delivered in Calcutta, or ten Rupees eight annas if sent by Post.*

No Official Orders or Notifications, the publication of which in the GAZETTE OF INDIA *is required by Law, of which it has been customary to publish in the* CALCUTTA GAZETTE, *will be included in the* SUPPLEMENT. *For such Orders and Notifications the body of the* GAZETTE *must be looked to.*

GOVERNMENT OF INDIA.

FINANCIAL DEPARTMENT.

CULTIVATION OF THE POPPY IN CHINA.

No. $\frac{M}{54}$, dated British Consulate, Kew Keang, the 22nd November 1871.

From—E. COLBORNE BABER, Acting Vice-Consul, Kew Keang,

To—The Secretary to the Government of India, FINANCIAL DEPT.

It is not in my power to add much to the information which has been previously furnished you with regard to the cultivation of the poppy in China and other particulars.

Referring to query No. 3, it appears certain that this cultivation is extending considerably. The undetailed nature of the information obtainable by foreigners renders it difficult to compare this year's crop with the last; but every intelligent native of this place who is questioned on the subject affirms without hesitation that the last two years have seen a notable increase in the production of native opium.

As regards this particular province of Kianghsi, it has been stated in previous reports that the poppy is cultivated to some extent in the southern districts. If such cultivation is still carried on, which appears extremely doubtful, it is so insignificant in extent as to be inappreciable. It is safe to say, practically speaking, that no opium is produced in this province.

In reply to query No. 4, I beg to enclose translation of a memorial to the Throne by a Censor upon the subject of poppy growth and taxation in the province of Ssu-chŭan, together with an imperial reply issued on the 5th October, both of which were published in the *North China Herald* of the 15th November. It is scarcely worth remarking that the subordinate officials of Ssu-chŭan are

extremely unlikely to carry the imperial prohibition into effect, now that they have discovered a system of increasing their revenue by an impost on the prescribed cultivation.

(*Query* 5).—The extension of poppy cultivation of course indicates a corresponding increase in the consumption of native opium. The native growth, however, can never seriously affect the consumption of the Indian import. Once accustomed to the superior flavour and potency of the latter, no opium smoker would dream of preferring the native variety, which in fact is only employed for purposes of adulteration, or consumed by the poorer classes and relinquished even by them the moment they can afford the larger price of the Indian drug.

It is often supposed that the inferiority in strength of the native opium may be accounted for by the ignorance and incompetence of the cultivators, who do not possess the experience of their Indian competitors. But both Chinese and Foreigners who are acquainted with the subject write in attributing this to the peculiar nature of the Chinese soil, the products of which are almost invariably deficient in strength and quality; witness the insipid fruits, the tasteless vegetables, the weak and flavourless tobacco, and a hundred other instances. Even the most carefully cultivated product of China, its tea, is undoubtedly inferior in strength, and many consider, in quality to the tea of Assam.

It appears then that the Chinese drug must always be inferior to the Indian; so long as this is the case, the opium smoker will continue to give the preference to the latter, in spite of the large difference in price, and the conclusion is certain that the consumption of Indian opium can never be seriously affected by the competition of the indigenous variety.

The native opium consumed in this vicinity is brought from Ssu-chŭan. That produced in Yunnan, Kneichow, and other localities scarcely ever finds its way to this neighbourhood, as the expense of transport renders it dearer on arrival than even Indian opium.

(*Query* 6).—Ssu-chŭan opium is sold here in packages weighing 6¼ catties at from 18 to 20 tls. per package. Allowing 16 packages to the picul, the price would vary from 288 to 320 tls.

For your further information, I beg to enclose copy of an article on Chinese opium taken from the Chinese Materia Medica of Dr. Porter Smith, published this year at Shanghai:—

Extract from Dr. Porter Smith's *Work on Chinese Materia Medica.*

Opium.—O-fu-yung, O-pien, Ya-pien, Yang-yen:—These words are all, except the last, intended to imitate the Arabian name for opium 'Afioum,' or the Persian name 'Afioun.' It is possible that the resemblance of the handsome flower of the poppy to that of the Hibiscus may have partly dictated the use of Fu-yung opium, coming perhaps from Arabia or Persia, has been known since the Mongol dynasty, at least in China. In the Ming dynasty it came into more general use in medicine. The Pen-Tsan describes its collection from the poppy just after flowering in a very clear way, and mentions the fact of its regular sale as a drug It was then given as an astringent and sedative, in dysentery, diarrhœa, rheumatism, catarrh, coughs, leucorrhœa, dysmenorrhœa, and spermatorrhœa, but generally in combination with other drugs. At the present time all this practice has dropped out, and the drug is branded with all the infamy and illegality which belong to the habits of opium-smoking and opium-eating. From the researches of Mr. Hobson, of Hankow, it appears that opium was a recognized product of the prefecture of Yung-Chang, in the west of the province of Yunnan, in the year 1736. For twelve years the poppy has been grown to produce opium in Honan and Shansi, and the popular story in Sze-chuen is that it was introduced there from India and Thibet some one hundred years ago. The poppy must have been long cultivated in China, and the introduction of the Indian drug by way of Canton merely prompted the use of the plant for this baneful purpose. Fully one-half of the best arable land in Sze-chuen is believed by Mr. Hobson to be given up in spring to the bearing of an annual crop of poppy. He has found that probably seven-tenths of the dwellers in towns in Sze-chuen are habitual opium-

smokers, and that more than one-half of the country-people has fallen victims to this seductive and injurious habit. Indian opium called Kung-kan or Kwangtû is being replaced by the native drug, although the price of the former and its name for better flavour are still kept up by the native preference for it. Sze-chuen opium, called 'Ch'uen-tu is produced to the extent of six thousand piculs annually, and can be produced at half of the price of the Indian drug in good years. The drug is made to imitate the Malwa and other forms of the foreign article, and has yielded Dr. R. A. Jamieson a percentage of 6·94 of morphia. It is liable to be adulterated with mud, sesamum, and hemp seeds, and an extract from the fruit of Tophora Japonica, but is positively less extensively tampered with than foreign opium in general. The best Sze-chuen drug, according to Mr. Hobson, comes from Kai-chan and Pi-hien in that province.* More extract for smoking Yen-kan, or Shuh-yen as it is called, is said to be got from the Sze-chuen opium than from the Indian product. Yunnan opium and that from Kweichaw are called 'Nan-tu,' all these forms of the drug being derisively spoken of as 'dirt' or as 'Yoh-tu,' medicinal earth. This is a good quality of drug, but is perhaps not better than that from Kansuh Province. The opium from Kansuh, Shensi, and Shansi is called 'Si-tu,' and yields a good extract. A large quantity of opium, some of it of a very inferior kind, is produced in Honan Province, and largely consumed on the spot. According to Richthofen, Ying-ching-hien, and places in Hwang-chan-fu, all in Hupeh, produce the drug Manchuria, and in fact all parts of the Chinese Empire produce more or less of this crop, which is sown in the tenth month and is secured by the third month of the next year. The drug is prepared on a large scale by mixing the ashes of the opium pipes with the raw opium, which facilitates the making of the watery infusion, which is further filtered and evaporated to the consistence of a thin extract, which is combustible in the opium pipe, held in the flame of a small lamp. Water dissolves from one-half to three-fourths of ordinary opium, but nothing is lost by the Chinese practised manipulator. The extract is usually made by the keepers of the opium saloons, who are heavily taxed and squeezed. The rich people and Buddhist priests make their own extract. The burning of this extract in an incomplete fashion, as is carefully practised by the Chinese, yields a smoke containing sundry incomprehensible empyreumatic compounds unknown to the chemist, but producing by absorption into the pulmonary vessels a stimulant or some perfectly indescribable effect, unknown to all but the actual smoker. Of the effects of this habit all have heard only too much. The moderate use of the pipe is not incompatible with the health of most of those who practise it. The positive necessity of improving or increasing the extract used leads to the loss of the volitional, digestive, and sexual powers, or, in other words, to the gradual degradation of the man. That the habit may be suddenly and permanently broken off is a fact of frequent experience. The use of amoneated valerian-tincture, the employment of nux vomica and other tonics, the temporary smoking of the powdered root of the Aucklandia costus, and, above all, the regular provision of wholesome food for both body and mind, are amongst the plans which may be adopted along with occasional disciplinary measures for the cure of a habit perfectly free from any mystery as to its cause or consequences. Prepared opium is exported from China at the present time.

Opium Cultivation.

The *Pekin Gazette* of October 15th contains the following representation by one of the Censors with reference to the growth of the poppy:—

Memorial by Wu Chên, Superintending Censor of the Chekiang Circuit—

Your servant, kneeling, memorializes, requesting that the practice of assessing the levy (of opium duty on growers of the poppy) may be forbidden, in order to further the execution of the laws.

He humbly observes that what should be aimed at in government is uniformity of practice. With uniformity, the confidence of the people is gained and obedience may be looked for; without it suspicions prevail and obstructions easily arise. Of late years imperial edicts have repeatedly been issued, prohibiting the cultivation of the poppy, and commanding that any officials who should show themselves remiss in carrying out these orders should be stringently impeached upon statement of the facts of their case. In this it is impossible not to recognize the true method for giving due protection to agriculture and a far-reaching system of administrative policy. Nevertheless, in despite of the reiterated issue of imperial exhortations,

* This statement is open to misconstruction. Indian opium, after sale to Chinese dealers at the ports, passes through several intermediate hands before it reaches the preparer, and is subjected to a series of adulterations, which increase it to twice its original bulk. Native opium, on the other hand, will bear little or no adulteration. The Indian drug in this adulterated form yields its own weight of extract; whereas the native product in an almost pure condition only gains one-fifth in preparation.

The case should really be stated as follows:—1 lb. of pure Indian opium = 2 lbs. of extract, while 1 lb. of pure native opium = 1⅕ lb. of extract.

the growth of the poppy goes on as before. On enquiring into the cause of this, it is found that the people have an excuse to rely upon, in the fact of the legalization of the duty on opium. The establishment of the duty on opium, however, was but a concession to temporary exigencies, and even although it may be said that it is a question affecting foreign relations and involves a large amount of revenue, it would seem at least that the levy should take place nowhere except at the ports and customs' barriers. Granting even that no inconsiderable number of Chinese subjects are engaged in the carriage of the drug, still whatever impost is levied should fall only upon merchants and traders; to assess farmers with the levy of a duty which should be collected only from the trading class is wholly unwarrantable. Your servant, being a native of the province of Sze-chuen, has learnt that not only is the illegal cultivation of the poppy not prevented by the District Magistrates, but that actually an opium duty is assessed and levied by them in proportion to the amount of land-tax paid. Their idea is, that it is by this means easy to obtain the full amount of revenues which they are bound to collect, whilst the method of levying the tax is extremely convenient to them. They pay no attention to the fact that traders, on the other hand, manage to escape taxation, whilst the farmer alone is burdened with difficulties. The policy of encouraging agriculture and keeping the trader down is thus wholly lost sight of; and the action taken is, moreover, not in accord with the imperial mandates prohibiting the cultivation of the poppy. It is obvious that when the officials of Government levy a duty of this kind upon the farming class, they cannot but be conscious that they are directly conniving at the practice, whilst the farmers in paying such an impost to Government are naturally emboldened openly to continue the cultivation. Hence it follows that the laws remain unexecuted. Your servant feels it incumbent upon him to request that a decree be issued, laying injunctions upon the Viceroy that stringent orders be given to his subordinates to the effect that in so far as the duty in question is concerned, steps should only be taken to maintain supervision over mercantile traffic and forbidding the imposition of a duty in proportion to the land tax, to the detriment of the agricultural class. Thus it will be plainly impressed upon the mind of the people that husbandry is one of the highest interests of the State. Should there still be any who are regardless of evil in their greed of gain, and who continued the illegal cultivation in despite of prohibitions, the local authorities should be required to keep a strict eye upon them and inflict the punishment which their offence deserves. If officials themselves wilfully continue to levy the impost, it should be permitted to the farmers to denounce them, and they also should have due punishment meted out to them. By this means, both officials and people being mutually on their guard, it may be hoped that exhortations and punishments will be duly regarded, and the laws will be carried into effect. Your servant submits the expression of his humble views, and entreats the sacred glance of Your Majesty thereupon.

To the foregoing memorial the following imperial reply was issued on the 5th October :—

With reference to the memorial by the Censor Wu Chên, stating that he has learnt that the District Magistrates of the province of Sze-chuen have not yet prevented the illegal cultivation of the poppy, and, on the other hand, levy a duty in proportion to the land-tax, which practices he proposes shall be forbidden, it is the duty of the local authorities strenuously to prevent the cultivation of the poppy where carried on among the people. With respect to the duty on opium, this impost is collected from the trading class, and no right exists to assess it upon the cultivators of the soil. If the facts be as stated by the Censor, obedience is not rightly yielded in the province of Sze-chuen, whence it arises that the abuses cited by him have come into existence; and it is to be feared that a similar state of affairs may likewise prevail in other provinces. Let stringent orders be issued by all the Viceroys and Governors concerned, directing their subordinates to take cognizance only of traders in the levy, of the opium duty, and forbidding them to assess the impost proportionately to the land-tax, in order that oppression may be guarded against. Notifications must also be issued from time to time warning farmers against the violation of the enactments they would commit by illegally cultivating the poppy. Respect this.

No. 1116, dated 10th February 1872.

From—R. B. Chapman, Esq., Secy. to the Govt. of India, Financial Dept.

To—Her Majesty's Vice-Consul at Kew Keang, China.

I am desired by His Excellency the Governor General in Council to acknowledge the receipt of your letter No. $\frac{M}{54}$, dated the 22nd November 1871, and in reply to convey to you the thanks of the Government of India for the valuable information which you have furnished relative to the cultivation of the poppy in China.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

IRRIGATION OPERATIONS IN THE N. W. PROVINCES DURING THE YEAR 1870-71.

Read the following papers :—

Resolution of His Honor the Lieutenant Governor on irrigation operations for Fusl Khurreef, 1870-71, No. 1503 I, dated 9th May 1871.
A3.—Comparative Statement of irrigation and rain-fall in the Canal Districts of the North-Western Provinces for the year 1870-71.
B3.—Statement in acres of crops irrigated by canal in zillahs.
C3.—Statement in acres of crops irrigated in Canal Divisions.

OBSERVATIONS.—The areas irrigated during the past three years have been as follows :—

	Acres.
1868-69	1,441,917
1869-70	1,089,673
1870-71	1,051,355

2. The total area irrigated this year falls short of last year's returns by 38,318 acres : in the khurreef returns there was a decrease of 103,472 acres, while in the rubbee an increased area of 65,154 acres was irrigated.

3. The decrease in the khurreef area has been explained in Resolution of His Honor the Lieutenant Governor, No. 1503, dated 19th May, to be due to the abundant and favourably distributed rain-fall as compared with that of 1869-70, which was fitful and uncertain.

4. The rain-fall during the rubbee season was chiefly confined to the months of January and February; there was no rain in November and March (both months of high demands for irrigation), and only a small quantity very locally distributed in the months of October and December. This will account to a great extent for the increase in area irrigated.

5. This increase was pretty general throughout the Doab, the only three districts which show a decrease being Saharunpore, Cawnpore, and Humeerpore.

6. The district in which the largest increase took place was Bareilly, amounting to 17,486 acres, or 185 per cent. more than in 1869-70.* Etawah also shows an increase of about 34 per cent. on the rubbee. The Doon, Bijnour, and Futtehgurh also show a considerable increase.

* This is understood to be due to the partial opening of Paha and Kylass Canals.

7. The rubbee crops on which the increase chiefly occurred were—

Wheat	77,931
Other cereals	6,830
While there was a decrease on pulses	20,781

8. The increase on wheat, amounting to over 20 per cent. on last year's returns, is apparently due to the dry October and November, and to the hot winds which prevailed in March, drying up the fields just before the ripening of the grain.

By Order, &c.,

W. H. GREATHED, *Col., R. E.,*
Joint-Secretary to Government, N. W. P.

Comparative Statement of Irrigation and Rain-fall for the Years 1869-70 *and* 1870-71 *in the Canal Districts of the North-Western Provinces.*

Zillahs.	Area in Acres.	Cultivated Area in Acres.	Areas Irrigated. Fusl Khurreef, 1870-71. Total Acres.	In comparison with 1869-70. Increase.	In comparison with 1869-70. Decrease.	Fusl Rubbee, 1870-71. Total Acres.	In comparison with 1869-70. Increase.	In comparison with 1869-70. Decrease.	Whole Year, 1870-71. Total Acres.	In comparison with 1869-70. Increase.	In comparison with 1869-70. Decrease.	Percentage of increase or decrease in 1870-71.	Rain-fall. 1869-70.	Rain-fall. 1870-71.	Percentage of increase or decrease in 1870-71.	Remarks.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
Saharunpore ...	1,425,825	1,001,818	47,904	...	10,552	40,092	...	8,761	87,996	...	19,312	— 18·0	20·9	38·6	+ 84·1	
Meozuffernuggur ...	1,054,065	703,459	59,097	...	15,029	77,686	5,289	...	136,783	...	9,740	— 13·4	29·7	38·0	+ 28·2	
Meerut ...	1,511,661	1,082,196	84,998	...	28,038	156,127	12,169	...	241,125	...	15,869	— 6·1	18·2	41·5	+ 128·0	
Boolundshuhur ...	1,221,373	823,004	42,242	...	22,146	79,726	10,701	...	121,968	...	11,445	— 8·6	22·4	31·9	+ 42·4	
Allygurh } Doab	1,190,118	932,640	44,871	...	11,119	68,009	8,062	...	112,880	...	3,057	— 2·6	27·9	28·3	+ 1·4	
Muttra } Doab ...	1,032,021	831,124	7,339	...	350	12,424	1,482	...	19,763	1,132	...	+ 6·0	20·7	28·8	+ 39·1	
Agra } Doab ...	1,199,037	886,774	525	...	62	959	114	...	1,484	52	...	+ 3·6	29·6	24·6	— 16·8	
Etah } Doab	898,838	585,330	10,151	...	1,890	18,306	551	...	28,457	...	1,339	— 4·4	20·9	24·1	+ 15·2	
Mynpoory ...	1,066,534	576,615	15,000	...	2,810	45,101	5,978	...	60,101	3,168	...	+ 5·5	35·6	38·4	+ 7·8	
Futtehgurh ...	1,084,399	674,034	8,303	...	2,799	18,655	5,843	...	26,958	3,044	...	+ 12·7	34·3	42·7	+ 24·4	
Etawah ...	1,044,123	572,221	17,200	...	18	49,667	11,175	...	66,867	11,157	...	+ 20·0	41·1	47·8	+ 16·3	
Cawnpore ...	1,514,343	855,663	27,158	...	1,408	47,786	...	8,529	74,944	...	9,937	— 10·5	35·0	43·2	+ 23·4	
Dehra Doon ...	653,271	86,657	4,655	408	...	7,763	1,581	...	12,418	1,989	...	+ 19·0	76·1	85·4	+ 12·2	
Bijnour ...	1,204,659	685,026	554	...	506	1,880	1,564	...	2,434	1,058	...	+ 77·1	30·9	43·5	+ 40·7	
Terai ...	469,760	91,735	2,700	...	286	1,607	209	...	4,307	...	77	— 1·7	47·2	63·0	+ 33·4	
Bareilly ...	1,518,579	1,084,290	25,037	...	6,609	26,888	17,485	...	51,925	10,876	...	+ 26·4	43·0	53·5	+ 24·4	
Jhansie ...	1,029,295	504,575	12	...	22	141	53	...	153	31	...	+ 25·4	54·2	33·1	— 38·9	
Humeerpore ...	1,464,641	783,987	406	...	237	386	189	...	792	398	48	— 5·6	38·5	44·1	+ 15·3	
Total ...	20,582,542	12,760,938	398,152	408	103,880	653,203	82,445	17,290	1,051,355	32,507	70,834	...	...	...	...	

Gross revenue, 1869-70	... Rs.	25,69,792
Ditto, 1870-71	... ,,	25,52,457
Decrease	... Rs.	17,335

Allahabad,
The 3rd December 1871.

P. S. MARINDIN, *Capt., R. E.,*
Asst. Secy. to Govt., N. W. P., Irrigation Branch.

Statement in Acres of Crops irrigated by Canals in Zillahs.

Description of Crops.	Saharunpore.	Moozuffernuggur.	Meerut.	Boolundshuhur.	Allygurh.	Muttra.	Agra.	Etah.	Mynpoory.	Futtehgurh.	Etawah.	Cawnpore.	Dehra Doon.	Bijnour.	Terai	Bareilly.	Jhansie.	Humeerpore.	Total.	Grand Total.
(1) Gardens and Orchards ...	1,482	1,056	2,675	1,488	1,257	699	34	365	1,054	390	1,107	1,090	537	...	1	622	...	1	13,858	13,858
(2) Sugarcane ...	11,123	21,758	47,217	3,378	206	101	5	301	3,900	2,421	4,936	6,698	739	1,108	492	8,122	...	183	112,688	112,688
(3) Cereal Grains—																				
(a) Wheat ...	32,432	68,001	129,185	53,388	39,425	8,238	584	12,723	30,220	9,922	27,030	20,530	5.964	1,201	1,181	21,439	15	56	461,534	...
Rice ...	31,724	27,027	11,503	197	619	35	...	428	559	31	471	518	3,601	...	2,207	16,738	9	212	95,879	...
(b) Barley ...	3,354	3,367	10,197	15,164	24,942	864	213	5,245	12,603	7,715	20,481	24,839	389	100	324	2,100	10	285	134,192	...
Bajra and Jowar ...	187	540	2,546	601	805	101	4	169	130	30	247	122	...	...	...	...	...	2	5,484	...
(c) Other Grains ...	1,361	1,447	5,488	7,422	1,352	344	10	166	1,582	622	1,985	581	559	25	8	1,613	114	45	24,724	721,813
(4) Pulses ...	2,088	5,458	13,452	3,669	2,198	940	131	235	1,296	110	829	1,506	80	...	53	409	1	...	32,455	32,455
(5) Fodder Crops ...	278	621	1,749	2,224	50	8	...	...	4	...	...	...	...	...	...	...	...	...	4,934	4,934
(6) Fibres—																				
(a) Cotton ...	2,118	5,299	10,779	7,639	6,307	1,128	29	936	592	25	150	65	2	...	...	...	...	...	35,069	...
(b) Other Fibres ...	109	500	1,193	475	5	5	...	...	168	1	4	...	...	...	...	...	...	...	2,460	37,529
(7) Dyes—																				
(a) Indigo ...	702	1,067	4,425	24,865	35,419	5,264	473	7,861	7,170	4,800	8,583	18,271	...	...	...	...	...	...	118,900	...
(b) Other Dyes ...	80	7	115	1,332	212	5	...	...	...	...	...	...	...	...	...	...	...	...	1,751	120,651
(8) Drugs—																				
(a) Opium ...	116	21	...	...	...	...	...	...	466	334	994	415	218	...	...	29	1	...	2,594	...
(b) Other Drugs ...	63	43	98	41	76	30	1	28	80	9	45	104	329	...	...	113	...	...	1,060	3,654
(9) Oil-seeds ...	252	103	10	31	7	1	...	...	...	...	...	...	...	...	41	735	...	...	1,180	1,180
(10) Miscellaneous ...	567	468	493	54	...	...		...	277	548	5	205	...	...	...	5	3	8	2,593	2,593
Total, 1870-71 ...	87,996	136,783	241,125	121,968	112,880	19,763	1,484	28,457	60,101	26,958	66,867	74,944	12,418	2,434	4,307	51,925	153	792	1,051,355	1,051,355
Total, 1869-70 ...	107,309	146,523	256,994	133,413	115,937	18,631	1,432	29,796	56,933	23,914	55,710	84,881	10,429	1,376	4,384	41,049	122	840	1,089,673	1,089,673

Allahabad,
The 3rd December 1871.

P. S. MARINDIN, *Capt., R.E.,*
Asst. Secy. to Govt., N. W. P., Irrigation Branch.

Statement in Acres of Crops irrigated in Canal Divisions.

Description of Crops.	Ganges Canal.							Eastern Jumna Canal.	Doon Canals.	Rohilkhund Canals.	Bijnour Canals.	Bundlekhund.	Total.	Grand Total.
	Northern.	Meerut.	Futtehgurh.	Boolundshuhur.	Allygurh.	Etawah.	Cawnpore.							
(1) Gardens and Orchards ...	281	1,786	358	1,176	2,647	1,811	1,649	2,989	537	623	...	1	13,858	13,858
(2) Sugarcane ...	10,802	31,044	13,232	1,641	807	8,409	9,352	26,757	739	8,614	1,108	183	112,688	112,688
(3) Cereal Grains—														
(a) Wheat ...	28,158	83,383	28,706	44,030	67,844	49,684	31,707	98,166	5,964	22,620	1,201	71	461,534	
(a) Rice ...	16,194	7,002	2,367	196	1,172	1,286	237	44,658	3,601	18,945	...	221	95,879	
(b) Barley ...	1,661	8,623	3,239	10,745	37,543	31,098	32,728	5,347	389	2,424	100	295	134,192	
(b) Bajra and Jowar ...	...	2,567	...	314	1,185	380	115	921	...	...	...	2	5,484	
(c) Other Grains ...	48	1,743	320	7,976	1,347	2,374	1,243	6,309	559	1,621	25	159	24,724	721,813
(4) Pulses ...	4,302	6,769	3,771	2,103	4,793	1,060	1,514	7,600	80	462	...	1	32,455	32,455
(5) Fodder Crops ...	65	113	871	1,516	62	...	...	2,307	...	...	...	...	4,934	4,934
(6) Fibres—														
(a) Cotton ...	...	3,351	1,581	6,918	9,084	384	84	13,665	2	...	...	...	35,069	
(b) Other Fibres ...	488	1	1,755	1	13	24	145	33	...	...	...	...	2,460	37,529
(7) Dyes—														
(a) Indigo ...	...	4,153	1,705	22,438	52,042	12,979	23,679	1,904	...	...	...	...	118,900	
(b) Other Dyes ...	87	...	...	1,658	6	...	...	...	...	...	...	...	1,751	120,651
(8) Drugs—														
(a) Opium ...	...	...	...	...	...	1,378	831	137	218	29	...	1	2,594	
(b) Other Drugs ...	40	56	...	37	163	188	23	111	329	113	...	...	1,060	3,654
(9) Oil-seeds ...	29	...	...	32	7	...	...	336	...	776	...	...	1,180	1,180
(10) Miscellaneous ...	...	...	...	67	...	...	1,035	1,475	...	5	...	11	2,593	2,593
Total, 1870-71 ...	62,155	150,591	57,905	100,848	178,715	112,055	104,342	212,715	12,418	56,232	2,434	945	1,051,355	1,051,355
Total, 1869-70 ...	62,589	206,983	58,437	61,018	181,416	101,868	108,095	251,067	10,429	45,433	1,376	962	1,089,673	...

Total, Ganges Canal, { 1869-70 = 780,406. 1870-71 = 766,511.

Note.—During the year the mean supply entering the Ganges Canal was 4,151 cubic feet per second, of which 3,413 cubic feet per second was consumed, and the remainder run off at the tail and in escapes. The average supply in the Eastern Junina Canal was 805 cubic feet per second.

Allahabad,
The 3rd December 1871.

P. S. MARINDIN, *Capt., R. E.,*
Asst. Secy. to Govt., N. W. P.,
Irrigation Branch.

GOVERNMENT OF INDIA.

DEPARTMENT OF AGRICULTURE, REVENUE AND COMMERCE.

SUPPLEMENTARY REPORT ON THE STATE OF THE SEASON, AND PROSPECTS OF THE CROPS IN THE CENTRAL PROVINCES.

Presidency or Province.	District.	Date of District Report.	Rain-fall for fortnight preceding.	Date of report from Local Government or Administration.	State of agricultural prospects.	Remarks of Local Government or Administration.
CENTRAL PROVINCES ...	Hoshangabad ...	February 15 ...	*Nil*	February 16 ...	Grain somewhat better; wheat has suffered.	
	Chindwára ...	.....	*Nil*	" ...	Prospects favorable.	

NOTE.—Received too late for publication in the Supplement of the 17th instant.

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No. 9 of 1872.

SUPPLEMENT TO

The Gazette of India.

CALCUTTA, SATURDAY, MARCH 2, 1872.

OFFICIAL PAPERS.

A SUPPLEMENT *to the* GAZETTE OF INDIA *will be published from time to time, containing such Official Papers and information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.*

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GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

REVENUE REPORT OF THE IRRIGATION DEPARTMENT, NORTH-WESTERN PROVINCES, FOR THE YEAR 1869-70.

Nos. 147—63I., dated 20th February 1872.

OBSERVATIONS—By the Government of India, P. W. DEPT.

OBSERVATIONS.—The principal feature noticeable in the irrigation operations of the year was a considerable falling off in the total area irrigated, and consequently in the revenue realized, as compared with the previous year, but still exhibiting a good advance on the year 1866-67, in which the highest results up to that time had been attained.

2. The following table shows the areas irrigated during this and the three subsequent years :—

Year.	Ganges Canal.	Eastern Jumna Canal.	Doon Canals.	Other Canals.	Total.
1866-67	634,734	239,555	8,852	100,249	983,390
1867-68	533,456	182,544	11,988	33,492	761,480
1868-69	1,078,399	274,101	14,223	75,195	1,441,918
1869-70	780,406	251,067	10,429	47,711	1,089,673

From this it is observed that, though there was a decrease of 352,305 acres as compared with 1868-69, there was an increase of 328,133 acres over 1867-68, and of 106,223 acres over 1866-67.

3. The gross revenue for the past year amounted to Rs. 25,69,792 against Rs. 31,47,161 in 1868-69, or a decrease of Rs. 5,77,369, but an increase of Rs. 3,95,361 over that of 1866-67, which amounted to Rs. 21,74,431.

4. The return from all the works throughout the North-Western Provinces, after deducting maintenance charges and establishment, amounts to Rs. 13,67,035 on a capital of Rs. 2,70,07,049, equivalent to Rs. 5·06 per cent. This capital sum, however, includes expenditure on surveys for new works, and on the construction of the Agra Canal, from which, of course, no return can be derivable until it comes into operation. Excluding such sums, the return amounts to 5·13 per cent. The long-discussed item of enhanced land revenue has likewise been excluded. Were this added at the moderate rate of 12 annas per acre, there would be an additional sum of Rs. 8,17,500 to be credited to the canals, and the net profits would be increased to 8·20 per cent.

5. The decrease in the irrigated area is ascribed to the heavy rains which fell during September and October, and so rendered the usual early waterings for the rubbee crops less necessary. Notwithstanding that the total rain-fall of the year was in excess, the rains were fitful as well as delayed, and consequently, it is said, the people were apprehensive of a recurrence of drought, and eagerly applied for water for the autumnal crops, so that the area irrigated during that season was actually greater by 18,000 acres than in the previous year of drought. This increase has taken place principally among the more valuable staples, as follows:—

Years.	Sugar.	Rice.	Indigo.	Cotton.
1867-68	87,050	97,867	77,976	8,265
1868-69	97,555	111,019	76,687	52,992
1869-70	104,596	117,548	130,248	55,883

6. The extension of the sugar and indigo cultivation is remarkable, and the fact that the latter is almost entirely due to the growth of small factories, owned and managed exclusively by Natives, is noteworthy. It is stated that "there are many hundreds of such factories in the Allyghur Division of the Canal,"—a sure indication that the increasing wealth of the land is passing into the hands of the people themselves.

7. The fact that the monsoon irrigation would gradually increase until it rivalled or exceeded that of the cold weather or spring crops, is a point which has frequently been maintained as showing the necessity of designing canals so as to carry a larger volume of water at that season instead of confining their capacity to the cold-weather supply.

8. The relative acreage irrigated and revenue realized from the Ganges Canal during the respective seasons of rubbee and khurreef, were as follows:—

	Acreage.	Revenue.
		Rs.
Khurreef	341,846	9,68,313
Rubbee	438,500	9,23,070
	780,406	18,91,383

9. The principal diminution of the gross income occurs on the Ganges Canal; it is attributed by the Superintending Engineer, as far as water-rate is concerned, to the copious rains which fell late in the autumn; but he points out that "the tillers of more than 438,000 acres found it profitable to pay full water-rate for what they took afterwards, and this shows not only how surely and steadily the benefits of irrigation are being discerned, but also of what great value those after-waterings are."

10. The decrease in plantations is said to be owing "to their having been rather overworked during 1868-69."

11. The charges for "Revenue management" and "Maintenance," which constitute the "Working expenses" are higher this year than for any previous year, but bear about an equal percentage to the gross revenue as they did in 1866-67.

12. The following table exhibits the results on the Ganges and Eastern Jumna Canals:—

TABLE D.

Ganges Canal.

Year.	Gross revenue.	Revenue management.	Percentage on gross revenue.	Maintenance charge.	Percentage on gross revenue.	Total working expenses.	Percentage on gross revenue.	Revenue. Per cubic foot of discharge.	Revenue. Per mile of canal.	Revenue. Per mile of rajbuha open.	Revenue. Per acre irrigated.	Working expenses. Per cubic foot of discharge.	Working expenses. Per mile of canal.	Working expenses. Per mile of rajbuha open.	Working expenses. Per acre irrigated.	Percentage of profit on capital sunk.
	Rs.	Rs.		Rs.		Rs.		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.		
1867-68 ...	13,63,524	2,90,993	21·34	5,28,690	38·77	8,19,683	60·11	390	2,085	448	2·556	234	1·253	270	1·536	2·48
1868-69 ...	24,41,559	3,61,349	14·79	4,32,873	17·73	7,94,222	32·51	525	3,733	785	2·264	171	1·214	255	0·736	7·39
1869-70 ...	18,91,383	3,76,660	19·91	5,55,290	29·36	9,31,950	49·27	407	2,892	616	2·423	200	1·425	303	1·194	4·09

Eastern Jumna Canal.

1867-68 ...	4,83,146	72,370	14·97	69,093	14·30	1,41,463	29·27	519	3,716	811	2·647	152	1,088	237	0·775	18·97
1868-69 ...	6,25,450	82,515	13·19	71,539	11·43	1,54,054	24·62	663	4,811	1,037	2·281	168	1,185	255	0·562	25·37
1869-70 ...	6,11,644	90,721	14·83	74,450	12·17	1,65,171	27·00	600	4,705	1,009	2·436	162	1,270	272	0·657	23·33

13. It is said that the falling off in the receipts of the Ganges Canal makes the result unfavourable, and one point more particularly urged, is that the greatest portion of the expenditure on the Chitoura Falls occurred within the year, instead of being distributed over the previous year as well; but as there has been a still larger sum expended during the current year on other Falls, it will probably be found that a similar outlay will be necessary until all the Falls have been more or less remodelled, and the maintenance charges will therefore continue high.

14. There has also been a steadily increasing cost in "Revenue management" as is evident from the following figures:—

Year.	Establishment.	Increase over 1866-67.	Irrigated area.
	Rs.	Rs.	
1866-67	2,55,342	.....	6,34,734
1867-68	2,90,993	35,651	5,33,456
1868-69	3,61,349	1,06,007	10,78,399
1869-70	3,76,660	1,21,328	7,80,406

which show that, though the irrigated area in 1869-70 is 25 per cent. greater than in 1866-67, the "Revenue management" charges have increased

nearly 50 per cent. The total cost of Establishment likewise shows an absolute increase of Rs. 70,344 over that of the previous year, while the result of the whole year is, that the "Working expenses" have risen again to nearly 50 per cent., while those of the Eastern Jumna Canal shows but little variation. The attention of the Government of the North-Western Provinces should be drawn to this increasing expenditure. The reasons advanced are hardly sufficient to account for it satisfactorily, as the additional cost on the Ganges Canal is not so much a relative, as a positive, increased outlay.

15. There has been a great improvement, however, in the collections, the outstanding balances during the year under review being Rs. 3,400 out of a demand of Rs. 23,41,000. In the Meerut Division particularly, out of the large demand of Rs. 18,21,000, 99·9 per cent. were realised, showing that the management, though more costly, has been very satisfactory, inasmuch as the revenue is actually and punctually assessed, and that the demands are promptly realised.

16. The gross return from a cubic-foot of water per second was but Rs. 378 on the Ganges Canal, whereas on the Eastern Jumna Canal it was Rs. 538. Consequently the financial results during the year under review have been less favourable for the former, the net return, exclusive of enhanced land revenue, being 4·09 per cent. In the previous year it amounted to 7·22 per cent., but in 1866-67, the best of all the preceding years, it was only 3·50 per cent., so that the year 1869-70 shows an advance of one-half per cent. in the net returns. Were the enhanced land revenue levied on the acreage irrigated credited to the Canal, it would raise the returns to about 6·6 per cent.

17. The proportion of "flow" to "lift" irrigation on all the canals is shown in the following table:—

	Flow.	Lift.
1867-68	68·0	32·0
1868-69	69·4	30·6
1869-70	73·5	26·5

and indicates a steady improvement. In the Etawah Division of the Ganges Canal, the proportion has been raised from 27·34 per cent. in 1865-66 to 52·91 per cent. in 1869-70.

18. As regards the wastage of water, the fines levied this year under this head have been Rs. 2,494 against Rs. 7,476 in the previous year. It is remarked that "it was to be expected that there should be a decrease in the fines for wastage of water in a year when it was much less sought after," but it may be inferred that the wastage was actually less.

19. The receipts from navigation amounted to Rs. 33,796, which is Rs. 5,000 less than during the previous year. This decrease is owing, first, to the canal having been closed for nearly two months during the year; and next, to the accident to the Jaoli Lock, which hampered the traffic for three months more. The average number of boats plying on the canal was 448, the up-traffic was 5,759 tons, and the down-traffic 20,557 tons, aggregating 26,316 tons. The average freight for cotton was 13½ pies per ton per mile; of other goods 7 pies. The distance which the goods were carried is not stated, so it is not possible to calculate the actual saving to the country effected by the reduced cost of carriage, accidents notwithstanding.

20. *Eastern Jumna Canal.*—This Canal has continued to maintain its satisfactory results. Notwithstanding that the rains were so much more favourable than during the previous year, there does not appear to have been the

same fluctuations as on the Ganges Canal, though the khurreef area was increased, and that of the rubbee decreased, the relative areas and revenue being as follows:—

	Acres.	Revenue.
		Rs.
Khurreef	119,163	3,11,592
Rubbee	131,904	2,72,250

The average supply passing the head at Kulsea was 1,305 cubic feet during the khurreef, and only 735 cubic feet during the rubbee.

21. The total capital expended amounted to Rs. 19,15,599; the gross revenue to Rs. 6,11,644; the working expenses to Rs. 1,65,171, leaving a net income of Rs. 4,46,473, or 23·33 per cent. on the above Capital outlay. The working expenses of this canal amount to 0·657 of a rupee on each acre irrigated, while the revenue averages Rs. 2·436 per acre.

22. *Doon Canals.*—The irrigation and revenue of these canals remain stationary. The income amounted to Rs. 38,284, the profit being only 2·58 per cent. The value of these small works, it is said with truth, is not to be judged by their financial results, for, without them, there could be no population or cultivation in the Doon at all. The Rajpore and Beejapore Canals give returns of over 6 and 7 per cent. on their own cost, but the general percentage is reduced by the cost of the works situated in the wilder parts of the country from which no great return can be expected for many years.

23. *Agra Canal.*—This is still in process of construction. The expenditure up to the end of 1869-70 was Rs. 10,18,580.

24. *Bundelkhund Works.*—These work at a loss of about Rs. 8,288 per acre, owing partly to some of the landholders having a prescriptive right to free irrigation. Improvements on these works do not seem to be feasible at present.

25. *Rohilkhund Canals.*—It is stated that these canals show a loss of Rs. 44,333 during 1869-70, attributable to the diminution of revenue, and to the increased cost of establishment employed on the surveys which have been carried on for new canals and which has been charged to revenue. The construction of the new canals will, it is added, put an end to these losses.

26. The remarks in the concluding section of the Chief Engineer's report regarding the administration of the Department, show that satisfactory results have followed the introduction of an improved procedure in revenue management, in the adoption of stringent measures for the check of wastage of water, and for securing prompt enquiry into all questions of overcharge of water-rate or erroneous measurements of land.

27. Attention has also been paid to drainage and for the removal of obstructions thereto caused by the canals and their subsidiary works.

28. The general results, though not so good financially as those of the previous year, have been on the whole satisfactory.

29. The Report was received nearly a year and a half after the close of the year to which it relates. The delay in its submission was partly due to the illness of the Chief Engineer. It is hoped, however, that future reports will be submitted very much earlier. They should, as a rule, reach the Government before September to admit of their being reviewed in the following month.

ORDER.—Ordered, that copies of these observations and of the Report be forwarded to the Secretary of State, the Financial Department, and the Department of Agriculture, Revenue and Commerce for information. Also, that the observations be communicated to the several Local Governments and Administrations in the Public Works Department, Irrigation Branch, for information, and to the Home Department for publication as a Supplement to the *India Gazette*.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

ABSTRACT OF INTERNATIONAL TRAFFIC BY THE INDO-EUROPEAN AND RED SEA LINES FOR THE MONTH OF JULY 1871.

	Number of Messages by each Route			Percentage of Total Number.	
	To India.	From India.	Total.	To India.	From India.
Viâ Teheran	841	828	1,669	38·44	34·36
„ Turkey	204	600	804	9·32	24·89
„ Suez	1,143	982	2,125	52·24	40·75
Total ...	2,188	2,410	4,598	100·00	100·00

Abstract of Foreign Messages for the month of July 1871.

	Route								Total.	
	Via Teheran.		By British Indian Sub Marine Cable.		Via Turkey.		By British Indian Extension Cable, &c.			
	No.	Indian Value.	No.	Indian Value.	No.	Indian Value.	No.	Indian Value.	No.	Indian Share of Value.
		Rs. A.		Rs. A.		Rs. A.		Rs. A.		Rs. A.
To and from Indian Stations.										
Sent	828	5,648 14	982	3,602 9	600	2,575 6	232	1,073 6	2,642	12,9[illegible]0 3
Received	841	5,438 9	1,143	4,703 6	204	891 2	248	1,306 12	2,436	12,339 13
Total ...	1,669	11,087 7	2,125	8,305 15	804	3,436 8	480	2,380 2	5,078	25,240 0
Transit Messages.										
From East to West ...	...	.....	959	5,225 2	...	.....	...	.....	959	5,225 2
„ West to East ...	120	670 12	675	3,228 4	113	436 8	...	.....	908	4,335 8
Total ...	120	670 12	1,634	8,453 6	113	436 8	...	.....	1,867	9,560 10
Grand Total ...									6,945	34,800 10

Note.—The foregoing Statement is published in supersession of the Return for the month of July 1871, published in the Supplement to the *Gazette of India*, dated the 6th January last, page 4.

GOVERNMENT OF INDIA.

DEPARTMENT OF AGRICULTURE, REVENUE AND COMMERCE.

REPORTS ON THE STATE OF THE SEASON AND PROSPECTS OF THE CROPS.

GENERAL REMARKS.—Except in Assam and Eastern Bengal, and setting aside some scattered showers in a few other places, the fortnight has been one of fair weather. The spring crops are harvested or rapidly approaching ripeness, and on the whole their out-turn is likely to be satisfactory. In certain districts of Bombay and in the Berars the short rain-fall has, however, resulted in a bad harvest. In the Northern Coast districts of Madras and that portion of Orissa bordering on the Chilka Lake some distress is anticipated, but measures have been taken to provide relief, and neither in the price of food or in the public health is there any sign that any dearth exists. Steps have been taken to meet the possibility of distress in Mhairwára also.

Presidency or Province.	District.	Date of District Report.	Rain-fall for fortnight preceding.	Date of report from Local Government or Administration.	State of agricultural prospects.	Remarks of Local Government or Administration.
MADRAS ...	Ganjám ...	February 29 ...	...	March 1 ...	Slight rain in some places on the 22nd and 23rd; prices slightly fallen; health good on the whole; cattle disease prevails.	Prospects in the Northern Coast districts remain unchanged: relief measures are extending. Elsewhere the condition of things is satisfactory.
	Vizagapatam ...	" 28 ...	*Nil*	February 29 ...	Drinking water failing; prices unchanged; market well supplied by importation; health good.	
	Godávari ...	" 26 ...	*Nil*	...	Market well supplied; prices steady; health good.	
	Krishna ...	" 28 ...	*Nil*	...	Prices steady; markets well supplied; health and prospects good.	
	Karnúl ...	" 28 ...	*Nil*	...	Prices steady; markets well supplied; health good; murrain present.	
	Nágapatam ...	" 28 ...	*Nil*	February 29 ...	Prices falling; prospects fair.	
	Trichinápalli ...	" 28 ...	Slight and partial.	...	Prices steady; crops in fairly good order; harvest fair.	
	Calicut ...	" 27 ...	*Nil*	...	Prices low and steady; health fairly good.	
BOMBAY AND SINDH ...	Karáchi ...	February 28 ...	*Nil*	February 29 ...	Rabi crops have suffered from frost a little in the Sihwán District, and considerably in Jharrak and Sháh Bandar Districts; cotton pickings over.	
	Gúzarát ... / Ahmadábád ...	" ...	...	"	Rabi harvest very promising; cotton picking in full operation.	

Presidency or Province.	District.	Date of District Report.	Rain-fall for fortnight preceding.	Date of report from Local Government or Administration.	State of agricultural prospects.	Remarks of Local Government or Administration.
BOMBAY AND SINDH—*continued.*	Khaira ...	February 28 ...	...	February 29 ...	Late crops, including cotton, good; picking of latter going on.	
	Súrat ..	" ...	...	" ...	Three-fourths of cotton crop picked; out-turn light; late crop dried up a good deal.	
	Khandesh ...	" ...	...	"	Grain and cotton prospects unfavorable.	
	Púna ...	" ...	*Nil*	" ...	Harvest already reaped; cotton crops not satisfactory.	
	Satára ...	" ...	...	" ...	All late crops bad; reaping nearly over; cotton picking begun.	
	Ahmednagar ...	" ...	...	" ...	No rain.	
	Dharwar ...	" ...	...	" ...	Late crops almost reaped; cotton picking in progress.	
BENGAL ...	Presidency Division ...	.....	...	February 29 ...	Weather fine and clear; prospects of crops good.	
	Dacca Division ...	.....	...	" ...	Cloudy and rainy, then fair and dry; crops promise well.	
	Chittagong Division ...	.....	...	" ...	Weather fine; crops good.	
	Cattack Division ...	.....	...	" ...	Weather in Puri windy and variable, but no rain; crops excellent in Cattack and Balasor; in Puri generally satisfactory; relief works in operation in the distressed tracts on the Chilka isthmus.	
	Chota Nágpur Division ...	.....	...	" ...	Weather fine; crops favorable.	
	Bhágalpur Division ...	.....	*Nil*	February 28 ...	Weather favorable; prospects of crops excellent	
	Sonthal Parganas ...	.....	*Nil*	" ...	Weather hot and dry; wheat and gram doing well; sugarcane sowings getting on favorably.	
	Patna Division ...	.....	*Nil*	" ...	Weather fine; wheat and barley generally good; pulses have suffered somewhat from the late rains.	
	Rájsháhi " ...	.....	*Nil*	" ...	Weather fair and seasonable; crops generally good; in Dinájpur mustard scarce for want of rain.	
	Bardwán " ...	.....	*Nil*	" ...	Weather getting hot; crops doing well; in Howrah spring crops somewhat damaged by hailstorm of the 20th.	

	Assam „ ...	.....	*Nil*	„ ...	Weather stormy and cloudy; crops satisfactory.	
	Kuch-Bihar Division ...	.....	*Nil*	„ ...	Weather seasonable; almost all crops reaped; those remaining are good.	
N. W. PROVINCES ...	.....	.....	...	February 29 ...	No rain at any of the reporting stations during the fortnight; prospects of the harvest good.	
PANJÁB ...	Delhi ...	February 29 ...	*Nil*	February 29 ...	Crops good; weather variable.	Agricultural prospects generally much as before.
	Ambála ...	„ ...	...	„ ...	Agricultural prospects good.	
	Jalandhar ...	„ ...	...	„ ...	.....	
	Lahor ...	„ ...	...	„ ...	Heavy fall last night at Lahor itself; none in district in previous fortnight.	
	Multan ...	„ ...	*Nil*	„ ...	Rain wanted; gram crops greatly damaged, and wheat crops slightly, by insects in Sarai Sidhu.	
	Ráwal Pindi ...	„ ...	1·	„ ...	Agricultural prospects good.	
	Pesháwar ...	„ ...	·1	.....	Ditto ditto.	
OUDH ...	Lucknow ...	February 28 ...	*Nil*	February 29 ...	The fall of rain, and fogs have proved injurious to the crops, but present westerly winds are doing good; prospects favorable.	
	Faizabad ...	„ ...	*Nil*			
CENTRAL PROVINCES ...	Jabalpur ...	February 28 ...	*Nil*	February 29 ...	Prospects of crops good throughout the division; in parts of the Jabalpur District the wheat has been attacked by "Girwa," but very trifling damage has been done as yet.	
	Nágpur ...	„ ...	*Nil*	„ ...	Rabi crops reaped in most places; prices steady.	
	Wardha ...	„ ...	*Nil*	„ ...	All crops, except opium, harvested; quality good, but quantity short.	
	Hoshangabad ...	„ ...	*Nil*	„ ...	Wheat suffering; gram good.	
	Chhindwára and Baitúl ...	„ ...	...	„ ...	Rabi being cut; yield average, and three-fourths of an average, respectively.	
	Nimár ...	„ ...	*Nil*	„ ...	Kharif below the average; rabi not favorable; wheat and gram being harvested.	
	Narsingpur ...	„ ...	*Nil*	„ ...	Crops favorable: might be better.	
	Ráipur ...	„ 26 ...	*Nil*	„ ...	Cloudy; wheat two-thirds of an average crop expected; pulse crops gathered; yield average; oilseeds three-fourths of an average.	
	Biláspur ...	„ ...	*Nil.*	...	Three-fourths of an average rabi crop expected; oilseeds have suffered considerably.	
	Sambalpur ...	„ ...	...	...	No change.	

Presidency or Province.	District.	Date of District Report.	Rain-fall for fortnight preceding.	Date of report from Local Government or Administration.	State of agricultural prospects.	Remarks of Local Government or Administration.
HAIDERABAD ASSIGNED DISTRICTS ...	East Berar ...	February 29 ...	*Nil*	February 29 ...	Spring crops mostly harvested; out-turn less than usual average; want of water increasing; health good.	
	West Berar ...	" ...	...	" ...	Harvest now over; want of water and fodder for cattle is increasing.	
RÁJPÚTÁNA ...	Sirohi ...	February 17 ...	...	February 23 ...	Same as last report.	
	Meywár ...	" ...	*Nil*	" ...	Water becoming very scarce; prospects very poor, crops being parched up.	
	Márwár ...	" ...	*Nil*	" ...	Water-supply good; prospects fair.	
	Deoli ... / Kotta and Jhaláwar ...	" ...	*Nil*	" ...	Prospects continue good.	
	Jaipur ...	" ...	A few drops.	" ...	Water-supply average; prospects good.	
	Ajmir and Mhairwára ...	" ...	*Nil*	" ...	In Ajmir, water supply tolerable; spring crops healthy; in Mhairwára tanks empty; rabi prospects very poor; measures adopted to prevent distress.	
CENTRAL INDIA ...	Western Málwa ...	February 29 ...	...	March 1 ...	No change since last report,	
	Bághalkand ...	" ...	...	" ...	No rain during the last fortnight; prospects of crops very good.	
MYSOR AND KHURG ...	Bangalor ...	February 29 ...	*Nil*	February 29 ...	In a few places the Bengal gram crop is blighted, and the sugarcane crop is withering from want of water; both are being harvested; the hot-weather paddy crop is progressing satisfactorily.	No material change in the prices of grain since last report.
	Mysor ...	" 27 ...	*Nil*	" ...	Sugarcane, cotton, and castor-oil seed are thriving.	
	Khurg ...	" 29 ...	*Nil*	" ...	Threshing of paddy crops nearly completed; fields being ploughed and manured in North Khurg; gram crops thriving; picking of coffee completed, and almost all exported.	

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No. 10 of 1872.

SUPPLEMENT TO

The Gazette of India.

CALCUTTA, SATURDAY, MARCH 9, 1872.

OFFICIAL PAPERS.

A SUPPLEMENT *to the* GAZETTE OF INDIA *will be published from time to time, containing such Official Papers and information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.*

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No Official Orders or Notifications, the publication of which in the GAZETTE OF INDIA *is required by Law, of which it has been customary to publish in the* CALCUTTA GAZETTE, *will be included in the* SUPPLEMENT. *For such Orders and Notifications the body of the* GAZETTE *must be looked to.*

GOVERNMENT OF INDIA.

ABSTRACT OF THE PROCEEDINGS OF THE COUNCIL OF THE GOVERNOR GENERAL OF INDIA, ASSEMBLED FOR THE PURPOSE OF MAKING LAWS AND REGULATIONS UNDER THE PROVISIONS OF THE ACT OF PARLIAMENT 24 & 25 VIC., CAP. 67.

The Council met at Government House on Wednesday, the 28th February 1872.

PRESENT:

His Excellency the Viceroy and Governor General of India, K. T., *presiding*.
His Honour the Lieutenant Governor of Bengal.
His Excellency the Commander-in-Chief, G. C. B., G. C. S. I.
The Hon'ble John Strachey.
The Hon'ble Sir Richard Temple, K. C. S. I.
The Hon'ble J. Fitzjames Stephen, Q. C.
The Hon'ble B. H. Ellis.
Major General the Hon'ble H. W. Norman, C. B.
The Hon'ble J. F. D. Inglis.
The Hon'ble W. Robinson, C. S. I.
The Hon'ble F. S. Chapman.
The Hon'ble R. Stewart.
The Hon'ble J. R. Bullen Smith.
The Hon'ble F. R. Cockerell.

CONSOLIDATED CUSTOMS ACT AMENDMENT BILL.

The Hon'ble SIR RICHARD TEMPLE, in moving for leave to introduce a Bill for the further amendment of the Consolidated Customs Act, said that the List of Business shewed that the object of this Bill was stated in the title. Perhaps he could best illustrate the object of the introduction of the measure

by reading to the Council the Statement of Objects and Reasons which accompanied the Bill:—

"The object of this Bill is to abolish certain 'General Funds' which have been formed under a provision of the Consolidated Customs Act, out of penalties imposed under the Act, and which at present can be employed only in the reward of informers and persons who have assisted in seizures under the Act.

"It is thought more convenient to transfer the sums so accumulated to the credit of Government, and thus render them available for the general purposes of the State, providing for all charges from the general revenues."

The Motion was put and agreed to.

EXTRADITION BILL.

The Hon'ble MR. STEPHEN introduced the Bill to consolidate and amend the law relating to offences committed in Foreign States, and moved that it be referred to a Select Committee with instructions to report in a month. He said that he had obtained leave to introduce this Bill some time since, and the Bill he had now to introduce had been prepared in consultation with the Foreign Department. He had very little to say about this Bill, except that, *firstly*, it was most necessary to consolidate the existing law, which was at present scattered over more Acts than one; and, *secondly*, he wished to point out that the Bill did not in any way alter in substance the present position of the Government in regard to Native States. In regard to some of the Native States, there were arrangements in force regarding extradition; this Bill would in no way interfere with them. But in almost every Native State in India it had been the practice to invest the Political Agent with power to try offences committed in those States by British subjects. That was an arrangement for which precedents might be found, to some extent, from European experience. The Consuls of European States exercised power of that kind in Constantinople and in other places. It had been exercised without any question whatever in every Native State throughout Northern India: MR. STEPHEN was not quite certain as to the practice in Southern India. At all events, the power of the Political Agent to exercise such jurisdiction existed, and it was not proposed to alter it, but simply to put it on a legal basis.

As to any Native States in which it might not hitherto have been the practice for the Political Agent to exercise this power (if any such there were), the Bill recognized the power of the Government, as against its own subjects, to erect Courts of this description, but it had nothing to do with its right as between Government and Government to erect them. The propriety of erecting such Courts would be a political question. The position of no Native State would be altered by the provisions of this Bill. If such Courts had been erected, they had been erected according to the existing practice; if they had not already been erected, the question whether or not they should be erected was a political question between the Government and the Native State concerned, and it was a question with which the legislature had nothing whatever to do.

There were, however, some further provisions in the Bill, which were intended to remedy certain defects in the existing law, which would, MR. STEPHEN thought, be welcomed in every Native State, and the necessity for which had been very much felt. He alluded to the extradition of offenders in the case of crimes committed by them in Native States. There were some provisions in the existing law on this subject; but they were not in a satisfactory state. The crimes for which extradition might be required were at present very loosely defined. They were contained in a list formed before the Penal Code was enacted. The effect therefore was that the whole law of extradition was at present in a very uncertain state. He hoped that the Bill would be found to provide a remedy for these evils. To the Native States, mixed up as they were, and in some cases divided from each other and from British territory by a merely imaginary line, it must be a great grievance to know that a person committing a

crime within their territory could escape from pursuit, except under circumstances of great difficulty, by crossing over into British territory. The effect of the present Bill would be that nearly all serious offences would be dealt with as easily if they were committed in Native States, as if they had been committed in British India.

MR. STEPHEN hoped the Bill would be received in a spirit of friendliness by the Native States: it was introduced with the view of rendering the administration of justice more expeditious than at present. As regards British subjects who made themselves liable to punishment and left the State and came into British territory, they would be liable to be arrested and handed over to the Political Agent in that State, who might, in the case of every such British subject (not being a European British subject), direct him to be tried by the Courts of the territory in which the offence was committed, if the Government of India consented to that arrangement. The effect would be that those States which established a regular system of administration of justice would be placed in a position by which they would be authorized to try offences committed in their States by Native British subjects. European British subjects in Native States would be placed on the same footing as that in which they stood in regard to offences committed by them in other parts of the country.

The Motion was put and agreed to.

ADMINISTRATOR GENERAL'S ACT AMENDMENT BILL.

The Hon'ble MR. STEPHEN also introduced the Bill to amend Act XXIV of 1867 (the Administrator General's Act), and moved that it be referred to a Select Committee with instructions to report in a month. He said that this was a very short Bill, and not one of very general importance. It had two objects and but two sections. The first section provided that the Administrator General's Act might be extended to parts of India other than those in which it was at present in force. There was a considerable European community in many parts of Native territory, and the Administrator General had no power to deal with the effects of Europeans who died there. That was an omission in the Administrator General's Act which it was intended to supply.

The second section of the Bill related to a matter in which the public certainly had little interest, but which had given rise to questions between the late and the present Administrator General. The law declared that the Administrator General was to be paid by a percentage on the estates which he distributed, and he was authorized to take, at the period of distribution, one and a half per cent. commission on the amount. Some years ago, in the late Administrator General, Mr. Hogg's time, a question arose as to what constituted a distribution. This question was referred for the decision of the Government, and the Government gave a decision upon the subject to the effect that, when an Administrator General set out an account or otherwise dealt with an estate at the request of the executor, it was a distribution. This decision continued to be acted upon till the present time. At the death of Mr. Hogg, the present Administrator General, Mr. Broughton, was appointed, and a question, in which the public had no interest, arose as to the exact point at which the one began, and the other ceased, to take percentage. As MR. STEPHEN had said, the point was of no public importance. But it was necessary that it should be decided in one way or the other in fairness to the Administrator General. He ought, no doubt, to get the advantage at one end or the other of his term of office; but no one Administrator General ought to take it at both ends. The provision in this Bill had been so framed as to embody the ruling of the Government of India ten years ago, and he might say that the matter had been settled to the satisfaction of the parties concerned.

The Motion was put and agreed to.

PANJÁB MUNICIPALITIES BILL.

The Hon'ble MR. STEPHEN, in moving for leave to introduce a Bill to prolong the operation of Act XV of 1867 (Panjáb Municipalities), said that the Panjáb Municipalities were established under Act XV of 1867, and in order to give the system a trial, it was enacted, in the first instance, for five years. The Act was on the verge of expiring: the period of time for which it was enacted was allowed to run very close, and the Panjáb Government was reminded of the fact by a communication from the Legislative Department. The law had been found to work very well, although there were one or two slight alterations which the Panjáb Government suggested. He had nothing to say on the subject at present beyond asking for leave to introduce the Bill: if any discussion did arise it would arise at a subsequent stage of the proceedings on this Bill.

The Motion was put and agreed to.

TRANSSHIPMENT OF GOODS ACT AMENDMENT BILL.

The Hon'ble MR. STEPHEN, in moving for leave to introduce a Bill to amend Act XX of 1867 (*to authorize the transshipment, without payment of duty, of goods imported into Calcutta, Madras and Bombay by steamers*), said that this Bill also was of no general interest. Act XX of 1867 authorized the Government to permit the transshipment of opium, without the payment of duty, in the case of goods imported into the ports of Calcutta, Madras and Bombay. At the time that Act was passed the ports of Burma were not thought of: it was now thought desirable that such transshipment should also be authorized at the ports in Burma. It was proposed to invest the Government with power to extend the Act to any port it thought fit.

The Motion was put and agreed to.

CARRIERS BILL.

The Hon'ble MR. STEPHEN, in moving for leave to introduce a Bill to amend the Law relating to Carriers, said that this Bill required a little more comment than the others. It was a Bill of very considerable importance, although it was not likely that any discussion would arise upon it at present. His Lordship and the Council were aware that the Contract Law had long been under the consideration of a Select Committee of the Council. It had been scrutinized by the Committee which sat upon it with the utmost care, and had been under the examination of the Committee for at least three years. MR STEPHEN hoped, after this long period of incubation, it might soon become part of the law of India. It was originally intended that the Carriers' Act and a part of the Railway Act, which at present regulated the Law of Carriers in India, should not form part of the Contract Law. It appeared to him that it would be a decided improvement to introduce these enactments into the Contract Law, so as to make that law as complete as possible. He had not a doubt that that would be the right and convenient course; and, accordingly, a new chapter of the Contract Law was drawn up, to consolidate the Carriers' Act and a part of the Railway Act, and to put the whole matter on a satisfactory footing. That chapter was forwarded to the Public Works Department and the Financial Department (which were the Departments principally interested in the subject), in order that the Committee might have their opinion as to the manner in which the present Bill would affect the Railways in which the State was so largely interested. An exceedingly strong expression of opinion was received from the Public Works Department, to the effect that the law was at present in a most unsatisfactory state, and that we could not adopt the law of England (as MR. STEPHEN had proposed) without incurring very great inconvenience. The law as it stood was contained partly in the Carriers' Act—an Act not very well drawn in itself—and partly in three sections of the Railway

Act, which did not fit well into the Carriers' Act; and considerable difficulty had been found in construing these different provisions in such a manner as to form them into one law. It was proposed to draw the Bill so as to fit these provisions into the Contract Law. The general principle of what was proposed was in accordance with the law of England, namely, that Carriers (including in the term the Railway Companies and the Government) should be liable for loss or damage to goods carried by them and be able to limit their liability by entering into special contracts. The Public Works Department wrote an opinion on this subject, which would be published when the Bill was introduced, to the effect that these proposed restrictions would be most mischievous; that Department gave it as its opinion that the liability of Railways for injury should be absolute, except only as to certain specified things, and that they should not be able to exonerate themselves from liability for damages caused by a variety of accidents which they ought to prevent. MR. STEPHEN need not go into the subject now; but when the Bill was introduced, he might do so more fully.

The Committee on the Contract Law, after reading this opinion, were, generally speaking, disposed to agree with the Public Works Department; but they felt that it affected the interests of the Railway Companies so largely that it would be impossible to carry the Bill through without hearing them. Accordingly, it was determined that these sections should, as originally proposed, be omitted from the Contract Law—that is to say, that MR. STEPHEN's proposition should be withdrawn, as the Committee did not think it would be worth while to postpone the passing of the Contract Law until the opinion of the Railway Companies and other parties interested in the subject could be obtained. On the other hand, it was felt to be clear that very great inconvenience did exist with regard to the Law of Carriers which ought to be remedied. It was therefore determined that MR. STEPHEN should introduce a Bill on the subject, and that it should be read as part of the Contract Law when passed. The Bill would be submitted for opinion; it would of course have to be sent home to England for the opinion of the Boards of the Railway Companies, in order to hear what they had to say on the subject, and would be taken into consideration next cold weather. The Contract Law would, in the meantime, be submitted to the Council without that chapter.

The Motion was put and agreed to.

The Hon'ble MR. STEPHEN asked leave to postpone the presentation of the final Report of the Select Committee on the Bill for declaring what laws are in force in the Panjáb.

Leave was granted.

BURMA COURTS BILL.

The Hon'ble MR. STEPHEN asked leave to postpone, also, the presentation of the Report of the Select Committee on the Bill to regulate the Courts in British Burma.

Leave was granted.

HIGH COURT JURISDICTION (SIND) BILL.

The Hon'ble MR. CHAPMAN, in moving for leave to introduce a Bill to remove doubts as to the jurisdiction of the High Court over the Province of Sind, said that the Bill would be of a purely declaratory character. The High Court of Bombay had never exercised jurisdiction in the Province of Sind, and it was certainly not the wish or intention of the Government that they should do so. There was, however, a case now pending before the High Court in which the question of jurisdiction had been raised; and it was just possible that, owing to a doubt as to the way in which the word "Presidency"

was used in the High Court Act and in the Letters Patent, the Court would be obliged to assert their jurisdiction. The proposed Bill would remove this doubt.

The Motion was put and agreed to.

PATTERNS AND DESIGNS BILL.

The Hon'ble MR. STEWART said—"MY LORD: I have the honour to move for leave to introduce a Bill for the protection of Patterns and Designs used in Manufacture, and, in doing so, I shall venture briefly to describe to the Council what I conceive to be the necessity for such a measure.

"I think it will not be disputed that every person who has an inherent right, by invention or acquirement, to any specific design, and who is willing to conform to suitable regulations in the matter, has as clear a title to have that right recognised and enforced as the owner of any other property of a like nature can have; and, in fact, the law of England affirms this principle by certain Statutes which protect the proprietor of duly registered designs against imitation of such designs, if such imitation be effected in England, and against the sale in England of such imitation, whether it be effected there or elsewhere.

"But these Statutes have not been extended to India, and, this being so, the proprietor of a design registered in England is not protected against the imitation of his design in India, nor can he, in India, restrain the sale of any imitation of his design, while the local proprietor is equally unprotected.

"Common sense and the precedent of English legislation must satisfy us, I think, that this state of things should not be allowed to continue; but it is not on the ground of theoretical justice alone that I deem legislation necessary. Numerous instances have arisen of imitations of designs, registered in England, being imported into and sold in India; while I am informed that, at this moment, there are persons in this immediate neighbourhood part of whose trade it is to imitate designs which have been registered in England and found suitable for India; so that legislation appears, not only theoretically right, but practically necessary.

"The measure which, if the Council shall give me leave, I propose to submit, will provide for the extension to India of the Statutes now in force in England, with such modifications and additions as may appear to be expedient; and the result, if the Bill shall be passed into law, will be that the owner of a design registered in England will be protected in the enjoyment, in India, of the rights and privileges which he already enjoys in England, but of which the existing state of our law deprives him; while the local proprietor will have conferred on him, so far as this legislature can confer them, the same rights—rights to which I think he already possesses an undoubted moral claim.

"It may be thought that the provisions of the Penal Code relating to trade-marks are applicable to such cases as I wish to provide for; but I understand that it is more than doubtful whether a design is a trade-mark at all; and at all events, it is well, I think, that there should be a remedy by civil process."

The Hon'ble MR. STEPHEN said that he had only one observation to make with reference to this Bill, which he was sure the Council would be obliged to the Hon'ble Mr. Stewart for introducing. It was the last observation which the hon'ble gentleman made, in reference to the provisions of the Penal Code as to property and trade-marks, regarding which MR. STEPHEN wished to say a word. He fully agreed with Mr. Stewart that there ought to be a civil as well as a criminal process for punishing the offence of counterfeiting trade-marks. As far as MR. STEPHEN had been able to learn, the

fact that the criminal law was used for the purpose of obtaining redress for civil wrongs was one of the greatest blots on the administration of justice in India.

The Motion was put and agreed to.

The following Select Committees were named:—

On the Bill to consolidate and amend the law relating to offences committed in Foreign States ——— The Hon'ble Messrs. Strachey, Chapman and Cockerell and the Mover.

On the Bill to amend Act XXIV of 1867 (the Administrator General's Act) ——— The Hon'ble Messrs. Inglis, Chapman, Stewart, Bullen Smith and Cockerell and the Mover.

The Council adjourned to Tuesday, the 5th March 1872.

CALCUTTA;
The 28th February 1872.

H. S. CUNNINGHAM,
Offg. Secy. to the Council of the Govr. Genl. for making Laws and Regulations.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

ABSTRACT OF FOREIGN MESSAGES FOR THE MONTH OF OCTOBER 1871.

DESCRIPTION.	ROUTE.								TOTAL.	
	VIA TEHERAN.		VIA TURKEY.		BY BRITISH-INDIAN SUB-MARINE CABLE.		BY BRITISH-INDIAN EXTENSION CABLE, &c.			
	No.	Indian Value.	No.	Indian Value.	No.	Indian Value.	No.	Indian Value.	No.	Indian Share of Value.
		Rs. A.		Rs. A.		Rs. A.		Rs. A.		Rs. A.
TO AND FROM INDIAN STATIONS.*										
Sent	624	4,579 10	799	3,546 5	957	5,933 8	327	1,985 12	2,707	16,045 3
Received	802	5,363 12	327	1,793 8	1,402	9,220 0	358	2,178 10	2,889	18,555 14
TOTAL ...	1,426	9,943 6	1,126	5,339 13	2,359	15,153 8	685	4,164 6	5,596	34,601 1
TRANSIT.										
From East to West ...	...	...	...	...	930	4,447 10	...	...	930	4,447 10
„ West to East ...	115	512 14	123	550 5	635	2,872 10	...	...	873	3,935 13
TOTAL ...	115	512 14	123	550 5	1,565	7,320 4	...	...	1,803	8,383 7
GRAND TOTAL ...									7,399	42,984 8

* Including Karachi *viâ* I. E. line, Bombay *viâ* B. I. S. Cable, and Madras *viâ* B. I. E. Cable.

Abstract of Foreign Traffic with India by the Indo-European and Red Sea Lines for the month of October 1871.

ROUTE.	NUMBER OF MESSAGES BY EACH ROUTE, EXCLUSIVE OF TRANSIT.			PERCENTAGE OF TOTAL NUMBER.		
	To India.†	From India.†	Total.	To India.	From India.	Total.
INDO-EUROPEAN { *Viâ* Teheran ...	802	624	1,426	31·69	26·22	29·04
INDO-EUROPEAN { „ Turkey ...	327	799	1,126	12·92	33·57	22·93
RED SEA ... „ Suez ...	1,402	957	2,359	55·39	40·21	48·03
TOTAL ...	2,531	2,380	4,911	100·00	100·00	100·00

† Including Karachi *viâ* I. E. line, and Bombay *viâ* B. I. S. Cable.

GOVERNME

PUBLIC WORK

COMPARATIVE ABSTRACT OF TRAFFIC ON INDI

Quarters.	East Indian. Main Line. 1870.	East Indian. Main Line. 1871.	East Indian. Jubbulpore Line. 1870.	East Indian. Jubbulpore Line. 1871.	Eastern Bengal. 1870.	Eastern Bengal. 1871.	Calcutta and S. E. (S.) 1870.	Calcutta and S. E. (S.) 1871.	Oudh and Rohilkhund. 1870.	Oudh and Rohilkhund. 1871.	Punjab and Delhi. 1870.	Punjab and Delhi. 1871.	Madras. 1870.	Madras. 1871.	Great Sou of India. 1870.	Great Sou of India. 1871.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
FIRST QUARTER.																
Total Earnings	718,404	658,700	36,986	40,188	41,869	54,986	2,023	2,774	6,572	6,868	86,271	84,813	127,741	119,924	17,330	[illegible]
Mean mileage open	1,131	1,279	223	223	113	156	28	28	42	42	530	567	707	805	168	[illegible]
Average receipt per week	55,262	50,669	2,845	3,091	3,221	4,230	156	213	505	528	6,636	6,524	9,826	9,225	1,332	[illegible]
Average receipt per week per mile open	48·8	39·6	12·8	13·9	28·5	27·1	5·6	7·6	12·0	12·6	12·5	11·5	13·9	11·5	7·9	[illegible]
SECOND QUARTER.																
Total Earnings	703,584	576,605	32,143	36,200	39,069	52,1 6	1,915	2,352	6,016	7,617	96,905	79,760	125,258	127,392	18,233	[illegible]
Mean mileage open	1,131	1,279	223	223	113	156	28	28	42	42	554	567	707	832	168	[illegible]
Average receipt per week	54,122	44,354	2,473	2,785	3,005	4,010	147	181	463	586	7,454	6,135	9,635	9,799	1,403	[illegible]
Average receipt per week per mile open	47·8	34·7	11·1	12·5	26·5	25·7	5·2	6·5	11·0	14·0	13·5	10·8	13·6	11·8	8·4	[illegible]
THIRD QUARTER.																
Total Earnings	542,823	408,963	16,314	20,705	44,154	54,029	1,519	1,438	5,758	4,481	72,137	46,259	104,803	140,267	17,975	[illegible]
Mean mileage open	1,131	1,280	223	223	113	156	28	28	42	42	559	534e	707	832	168	[illegible]
Average receipt per week	41,756	31,459	1,255	1,593	3,396	4,156	116	111	443	345	5,549	3,558	8,062	10,790	1,383	[illegible]
Average receipt per week per mile open	36·9	24·6	5·6	7·1	30·1	26·6	4·1	4·0	10·5	8·2	9·9	6·7	11·4	13·0	8·2	[illegible]
FOURTH QUARTER.																
Total Earnings	636,191	659,011	36,652	45,269	53,041	39,960	1,756	1,624	7,188	6,608	84,455	94,340	117,693	142,359	17,291	[illegible]
Mean mileage open	1,131	1,280	223	223	113	156	28	28	42	42	572g	565	716	832	168	[illegible]
Average receipt per week	48,938	50,693	2,819	3,482	4,080	3,074	135	125	553	508	6,497	7,257	9,053	10,951	1,330	[illegible]
Average receipt per week per mile open	43·3	39·6	12·6	15·6	36·1	19·7	4·8	4·5	13·1	12·1	11·4	12·8	12·6	13·2	7·9	[illegible]
TOTAL FOR THE YEAR.																
Total Earnings	2,601,002	2,303,279	122,095	142,362	178,133	201,101	7,213	8,188	25,534	25,574	339,768	305,772	475,495	529,942	70,829	[illegible]
Mean mileage open	1,131	1,280	223	223	113	156	28	28	42	42	554½	558	709	825	168	[illegible]
Average receipt per week	50,019	44,294	2,348	2,738	3,426	3,867	139	157	491	492	6,534	5,869	9,144	10,191	1,362	[illegible]
Average receipt per week per mile open	44·2	34·6	10·5	12·3	30·3	24·8	5·0	5·6	11·7	11·7	11·8	10·5	12·9	12·4	8·1	[illegible]

NDIA.

PARTMENT.

LWAYS FOR THE FOUR QUARTERS OF 1870 and 1871.

Carnatic.		Great Indian Peninsula.		Khamgaon Branch.		Oomra-otee Branch.	Bombay, Baroda, and Central India.		Sindh.		Total.		Remarks.
1870.	1871.	1870.	1871.	1870.	1871.	1871.	1870.	1871.	1870.	1871.	1870.	1871.	
£	£	£	£	£	£	£	£	£	£	£	£	£	
617	728	510,207	526,918	151a	951	4335	142,436	123,769	19,779	16,504	1,710,606	1,653,568	(a.) Receipts for 2 weeks and 4 days.
19	19	1,063	1,258	7	7	5	312	312	106	106	4,449	4,975	(b.) Receipts for 6 weeks.
24	56	39,247	40,532	59	73	72	10,957	9,521	1,521	1,270	131,632	127,236	
4	3·0	36·9	32·2	8·4	10·4	14·4	35·1	30·5	14·3	12·0	29·6	25·6	
150	1,246	541,330	540,198	775	965	680	171,727	162,396	23,741	17,871	1,761,846	1,623,297c	(c). These are the corrected figures for the 2nd Quarter of 1871.
19	19	1,184	1,269	7	7	5	312	318	106	106	4,594	5,019	
88	96	41,641	41,554	60	74	52	13,210	12,492	1,826	1,375	135,527	124,869	
6	5·1	35·2	32·7	8·6	10·6	10·4	42·3	39·3	17·2	13·0	29·5	25·0	
796	839	215,999	286,961	41d	171	312	60,180	60,863	16,438	20,652	1,098,939	1,063,341	(d.) Receipts for 2 weeks and 4 days.
19	19	1,184	1,274	7	7	5	312	326	106	106	4,599	5,000	(e.) Owing to damage done to the permanent-way by the heavy floods during this Quarter, the mean mileage open has decreased.
61	65	16,615	22,074	16	13	24	4,629	4,682	1,264	1,589	84,546	81,795	
2	3·4	14·0	17·3	2·3	1·8	4·8	14·8	14·4	11·9	15·0	18·4	16·4	
730	742	370,494	476,034	63f	244	484	104,567	120,093	14·212	18,213	1,444,333	1,624,865	(f.) 1st to 31st December.
19	19	1,198	1,274	7	7	5	312	335	106	106	4,635	5,040	(g.) Include Rajghat to Mooltan, 6 miles.
56	57	28,500	36,618	14	19	37	8,044	9,238	1,093	1,401	111,112	124,990	
0	3·0	23·8	28·7	2·0	2·9	7·4	25·8	27·6	10·3	13·2	24·0	24·8	
513	3,555	1,638,030	1,830,111	1,030	2,331	1,909	478,910	467,121	74,170	73,240	6,015,721	5,965,071	
19	19	1,157	1,269	7	7	5	312	323	106	106	4,569	5,009	(h.) Excludes Rajghat to Mooltan, 6 miles.
68	68	31,501	35,194	46	45	46	9,210	8·983	1,426	1,409	115,713	114,723	
6	3·6	27·2	27·7	6·5	6·4	9·2	29·5	27·8	13·5	13·3	25·3	22·9	

GOVERNMENT OF INDIA.

DEPARTMENT OF AGRICULTURE, REVENUE, AND COMMERCE.

EXPORTS OF COTTON FROM THE CENTRAL PROVINCES AND THE BERARS.

No. 55C, dated Camp Khangaon, the 22nd February 1872.

From—HARRY RIVETT-CARNAC, Esq., Commr. of Cotton and Commerce with the Govt. of India,

To—The Secretary to the Chamber of Commerce, Bombay.

In continuation of former correspondence, I have now the honor to forward, for the information of your Chamber, copy of a statement showing approximately the exports of cotton from the stations of the Great Indian Peninsula Railway Company in the Central Provinces and the Berars, from the commencement of the present season up to the 10th instant.

2. It will be seen that, up to the above-mentioned date, the quantity of cotton sent down to Bombay amounted to 68,144 full-pressed bales, 15,443 half-pressed bales, and 16,619 dokras, making a total of about 89,126 Bombay bales of half a kandy each. As compared with the figures of former years, this season's exports stand as follows :—

Exports from the commencement of the Season up to the 10th of February.

	Full-pressed bales.	Half-pressed.	Dokras.	Total reduced to bales.
1869-70 ...	17,679	19,232	9,177	39,970
1870-71 ...	30,418	14,469	8,842	47,834
1871-72 ...	68,144	15,443	16,619	89,126

3. The exports then of the present season up to date do not fall far short of double the quantity exported during the same period of the past season, 1870-71, and are actually considerably more than double that of the corresponding period of 1869-70. The increase is to be noticed at all the stations, save indeed Nandorah, which no longer exists as a cotton station, Khangaon having taken its place, whilst the exports from Wurdah (Hingunghat) and Oomraotee are especially remarkable.

4. In my former reports I have stated my opinion that, owing to the scant rain-fall in parts of the Berars and in the adjoining country, a falling off in the total exports from these provinces is to be expected. The above figures will doubtless suggest that this view may after all be incorrect. I should be glad if this should turn out to be the case. But I fear that the large supplies that have already been brought into the market may easily be accounted for, and that we must still be prepared to see the season close early with the result already predicted.

5. The season has undoubtedly been an early one. The jowarree (millet) crop in many parts of the Berars being poor, this the cultivator's first care, was harvested without difficulty. This made labour plentiful, and the cotton fields were thus picked and the produce brought to market earlier than usual. Then again the bad season has undoubtedly caused distress. Gold which has been known to fetch as much as Rs. 17 and Rs. 17½ a *tolah*, has been selling at from Rs. 16 to 15½ per tolah, and silver ornaments also are to be bought cheap. At one time apprehension was entertained regarding the realization of the Government revenue. But this has nearly passed. The people have, however, been obliged to sell their produce without delay; few can afford to hold back, and this has thrown cotton on the market earlier than usual. Added to this the recent high prices have attracted many to market, and the whole result is that the season has been much earlier than usual, and that much

of the cotton which, under ordinary circumstances would have come in by degrees, has been brought in all at once. No one believes that these supplies can continue much longer, and the season is expected to close at a much earlier date than in former years.

6. The above remarks apply chiefly to West Berar, where the want of rain has been most severely felt. As one goes east matters improve, for there rain has been more plentiful. The exports from Oomraotee and Hingunghat have been exceptionally large, and the reasons given above hold good in East Berar also. In the Wurdah Valley, the season, as already reported to you, has undoubtedly been good. Here also prices are doing much to attract large supplies. If prices continue as at present, much of the cotton which is generally taken up for home consumption may find its way to Bombay, and this may to some extent affect the exports. I see no reason, however, to alter the estimate already submitted to your Chamber that, consequent on the partial failure of the crop in parts of the Berars, we must be prepared for a falling off of about 20 per cent. on the total exports from these provinces. Your Chamber have already had before them the facts on which this opinion is founded, and they are in a position to judge for themselves of the likelihood of its being correct.

7. It is satisfactory to see the increase in the supplies from the Nerbudda Valley. The figures of this and former years are compared below :—

Exports from the Nerbudda Valley.

	Dokras.	Equivalent to Bales.
10th February 1870 ...	1,960	653
10th February 1871 ...	4,361	1,454
Up to 10th February 1872 ...	14,336	4,779

8. It will also be noticed with satisfaction that the quantity of full-pressed cotton sent down is large. During the present season out of a total export equivalent to about 89,126 bales, 68,144 bales, or about 77 per cent., have been full pressed. This result is compared below with the exports of former years :—

	Total exports equivalent to Bales.	No. of full-pressed Bales.	Percentage of full-pressed.
Season 1869-70	39,970	17,679	42
" 1870-71	47,834	30,418	64
" 1871-72	89,126	68,144	77

9. The small State Railways to Khangaon and Oomraotee are doing their work well, as the following figures will show :—

Quantity of Cotton carried during the present season up to 10th February.

	Full-pressed.	Half-pressed.	Dokras.
Khangaon Railway ...	18,843	410	51
Oomraotee Railway ..	28,211	1,469	29

10. The difference in the exports from Khangaon and Oomraotee illustrates the condition of West and East Berar. In ordinary seasons Khangaon is as much ahead of Oomraotee, as Oomraotee this season is of Khangaon.

The following Statement shows in detail the quantity of cotton exported from the stations of the Great Indian Peninsula Railway in the Central Provinces and the Berars, from 1st October 1871, *up to week ending* 10th February 1872, *as compared with the exports up to the same date in the seasons of* 1870-71 *and* 1869-70.

Stations.	Exports for week ending 10th Feb. 1872.			Total Exports up to 10th Feb. 1872.			Total Exports up to 10th Feb. 1871.			Total Exports up to 10th Feb. 1870.		
	Full-pressed bales.	Half-pressed bales.	Dokras.	Full-pressed bales.	Half-pressed bales.	Dokras.	Full-pressed bales.	Half-pressed bales.	Dokras.	Full-pressed bales.	Half-pressed bales.	Dokras.
Nagpore ...	...	...	...	...	142	...	...	139	...	...	158	920
Wurdah ...	963	538	...	15,757	5,021	5	3,778	3,588	6	1,751	7,107	20
Poolgaum ...	...	20	...	...	403	...	...	933	...	...	2,244	153
Chandoor ...	...	...	...	...	222	...	...	97	...	...	316	...
Budnaira ...	...	...	...	...	...	...	11,689	1,901	8	5,774	2,333	122
Oomraottee ...	4,055	385	...	28,211	1,469	29	...	...	...	...	...	...
Mortizapore ...	...	776	73	...	3,139	1,991	...	802	40	...	735	237
Akola ...	...	...	...	...	...	28	...	102	103	...	1,500	693
Sheagaum ...	712	707	...	5,333	4,473	145	2,593	5,321	143	2,488	3,330	3,892
Khangaum ...	3,489	75	...	18,843	410	51	11,733	973	2,253	...	...	...
Nandoorah ...	...	42	...	...	164	...	625	613	136	7,666	1,459	807
Mulkapore ...	...	...	...	...	...	34	...	...	1,792	...	...	373
Buranpore ...	...	...	...	...	...	1,599	...	...	1,057	...	...	1,018
Khandwa ...	...	...	489	...	...	9,003	...	...	827	...	...	942
Hurdah ...	...	...	25	...	...	2,052	...	...	...	...	...	...
Sohagpore ...	...	...	...	...	...	106	...	...	832	...	...	...
Garrawara ...	...	...	...	...	...	142	...	...	273	...	...	...
Nimborah ...	...	...	75	...	...	1,372	...	...	...	...	...	...
Seonee ...	...	...	...	...	...	...	...	...	272	...	...	...
Bagrah ...	...	...	...	...	...	...	...	...	425	...	...	...
Bunkerry ...	...	...	...	...	...	...	...	...	66	...	...	...
Dongergaum ...	...	...	39	...	...	62	...	...	...	...	...	...
Etarsa ...	...	...	...	...	...	...	...	...	597	...	...	...
Nursingpore ...	...	...	...	...	...	...	...	...	12	...	...	...
Total ...	9,219	2,543	701	68,144	15,443	16,619	30,418	14,469	8,842	17,679	19,232	9,177

TOTALS.

	1871-72.	1870-71.	1869-70.
Full-pressed	68,144	30,418	17,679
Half-pressed	15,443	14,469	19,232
Dokras	16,619 = 5,539	8,842 = 2,947	9,177 = 3,059
	3	3	3
	89,126	47,834	39,970

Bales of 400 lbs. each.

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No. 11 of 1872.

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GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

STEPS TAKEN TOWARDS THE CONSTRUCTION OF THE INDORE (STATE) RAILWAY.

No. 41 R, dated 26th February 1872.

From—The Govt. of India, P. W. DEPT.,

To—Her Majesty's Secretary of State for India.

The correspondence ending with your Grace's Despatch No. 39 of the 9th June 1870, related to the undertaking of the Maharajah Holkar to place a million sterling at the disposal of our Government in aid of the expense of a railway to unite the Great Indian Peninsula Railway in Nimar with Indore. The negotiations which resulted in this were reported to your Grace on the 29th March 1870, and, as mentioned to be our intention in the 11th para. of our Despatch No. 40, we took immediate steps for commencing the survey of the line.

2. A reference to a map will show that the investigation of the country between the Great Indian Peninsula Railway and Indore demanded much engineering skill, as well as time and labour, before the Government could be justified in accepting any particular alignment. One point only was fixed, and that a terminal point, Indore; and though it was considered of great importance that Mhow should be on the line, if conveniently and economically possible, it is evident that this advantage must be foregone if found to be inconsistent with other and more imperative considerations which naturally present themselves in fixing the direction of any line uniting Indore with the Great Indian Peninsula Railway, and the decision of which practically determines the location of the railway. Indore and Mhow are both situated on the Malwa table-land, Mhow being near to the edge of the abrupt scarp which bounds it to the south, and which is broken into short spurs affording but little base for gaining height, the Nerbudda River flowing